

KV-M2120U/M2121U

RM-670

SERVICE MANUAL

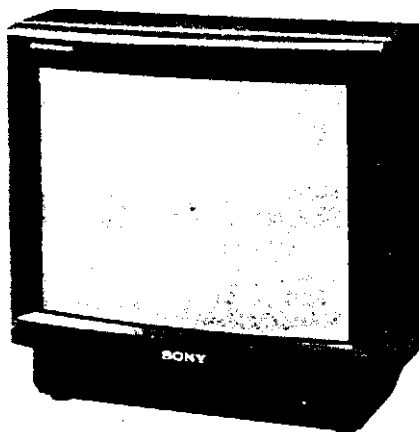
UK Model

KV-M2120U

Chassis No. SCC-B62G-A

KV-M2121U

Chassis No. SCC-B62H-A



BE-1 CHASSIS

Note: The service manual for RM-670 has been issued separately.

MODELS OF THE SAME SERIES

KV-M2120/M2121	KV-M14U/M14TU/P14U
KV-M19TU	
KV-M16U/M16TU	

SPECIFICATIONS

Television system	British TV standards
Colour system	PAL
Channel coverage	UHF 21-68
Picture tube	Trinitron tube 100" degree deflection Approx. 54.5cm (21 inches) (Approx. 51cm picture measured diagonally)
Input	21-pin connector : CENELEC standard AV connector
Output	Earphone jack : minijack, 21-pin connector : CENELEC standard
Sound output	5.0W (music power)
Power consumption	99W
Dimensions	Approx. 518 X 480 X 478mm (W/H/D)
Weight	Approx. 23kg
Supplied accessories	RM-670 Remote Commander (1) IEC designation R6 batteries (2)

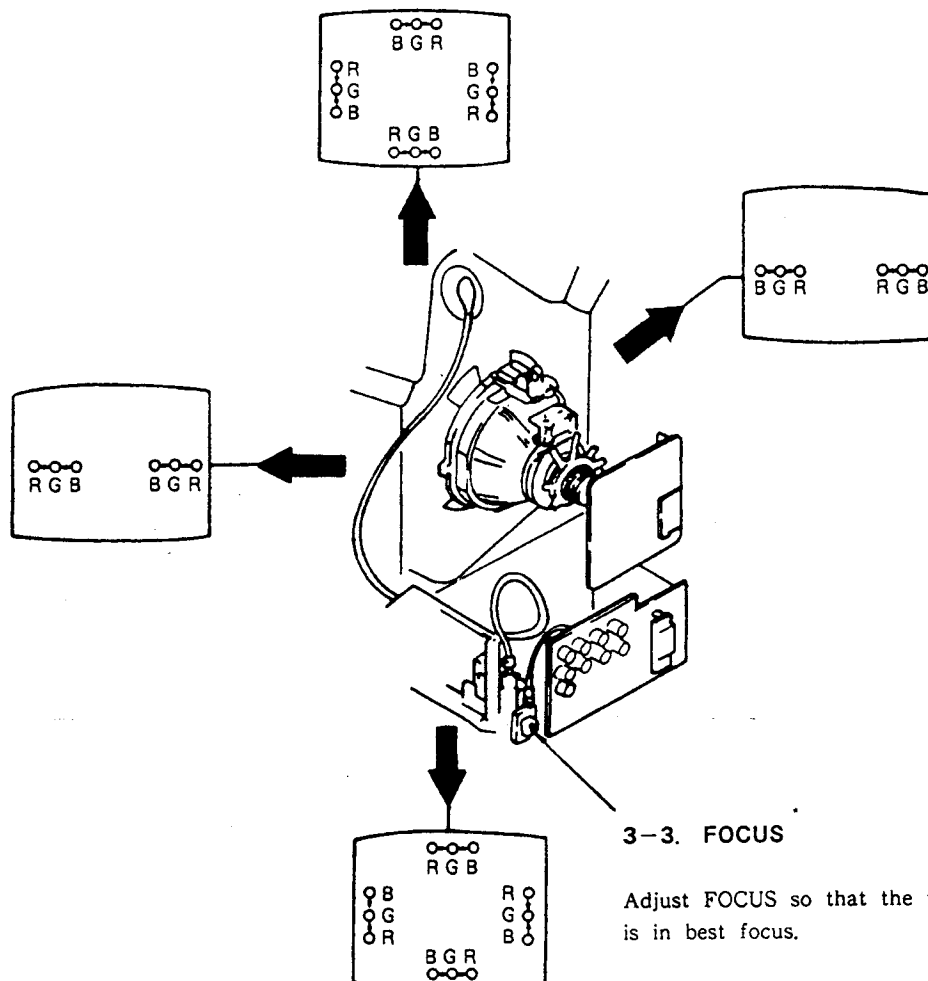
Design and specifications are subject to change without notice.

TRINITRON® COLOUR TV
SONY®

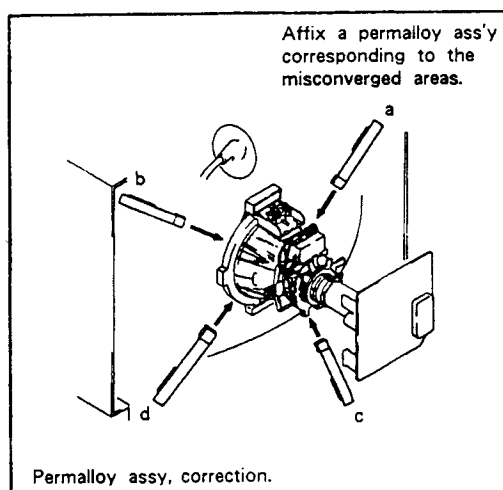
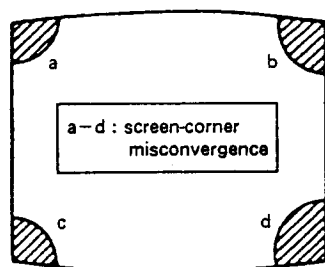
(2) Dynamic Convergence Adjustment

Preparation :

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment..
- 1. Slightly loosen deflection yoke screw.
- 2. Remove deflection yoke spacers.
- 3. Move the deflection yoke for best convergence as shown below.
- 4. Tighten the deflection yoke screw.
- 5. Install the deflection yoke spacers.



(3) Screen-corner Convergence

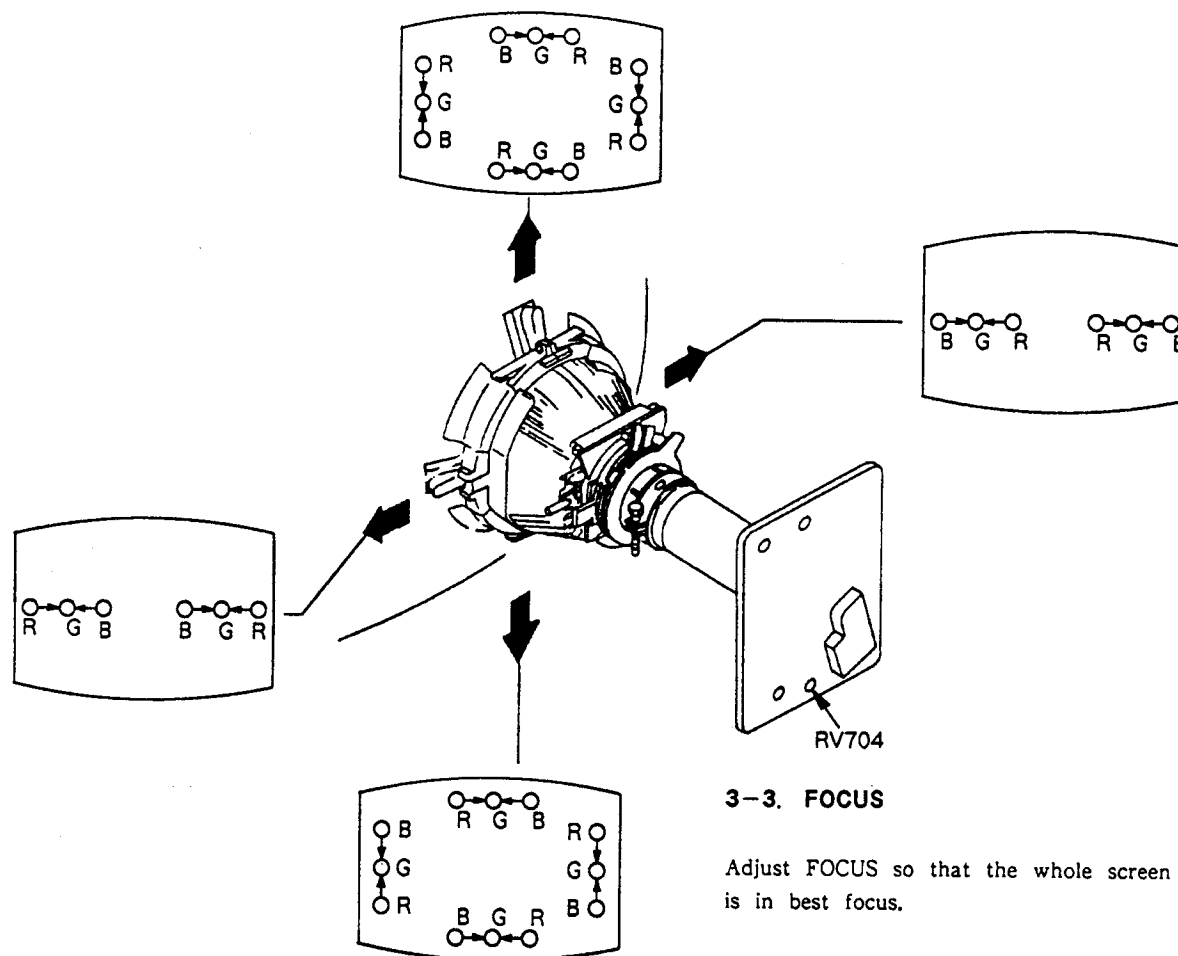


(2) Dynamic Convergence Adjustment

Preparation :

● Before starting, perform Horizontal and Vertical Static Convergence Adjustment..

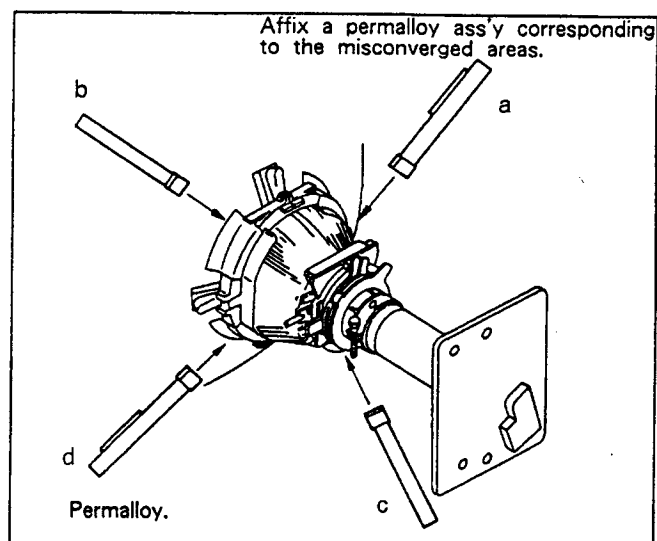
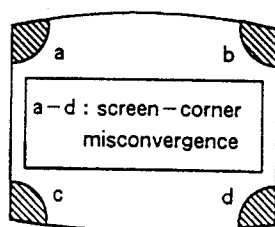
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



3-3. FOCUS

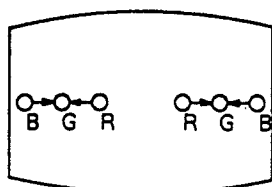
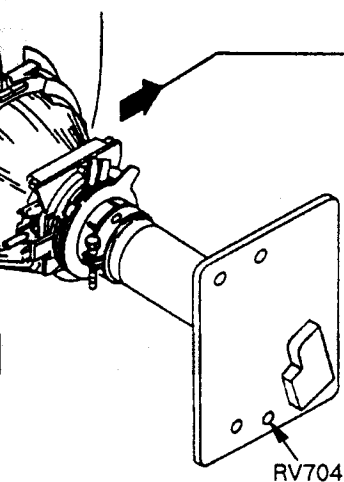
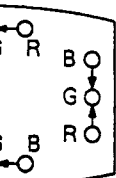
Adjust FOCUS so that the whole screen is in best focus.

(3) Screen-corner Convergence



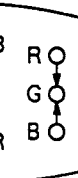
Static

3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



3-3. FOCUS

Adjust FOCUS so that the whole screen is in best focus.



3-4. WHITE BALANCE

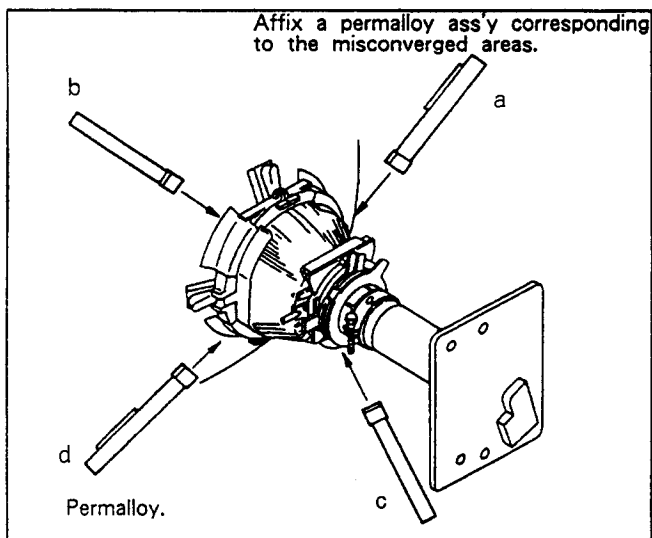
(Screen (G2) Setting)

1. Input dot signals from the pattern generator.
2. Set the picture BRIGHTNESS control to the minimum level.
3. Apply 140 V DC to the cathodes of R, G, and B from an external power source.
4. While watching the picture, adjust the G2 volume (RV703) immediately before the fly-back line disappears.

(White Balance Adjustment)

1. Input all-white signals from the pattern generator.
2. Adjust the BRIGHTNESS and COLOUR controls to the standard level.
3. Adjust the white balance using RV701 (B DRIVE) and RV702 (G DRIVE).

In the following adjustments, the CONTRAST COLOUR and BRIGHTNESS controls are set to normal unless otherwise specified.



3-4. WHITE BALANCE

[Screen (G2) Setting]

1. Input dot signals from the pattern generator.
2. Set the picture BRIGHTNESS control to the minimum level.
3. Apply 140 V DC to the cathodes of R, G, and B from an external power source.
4. While watching the picture, adjust the G2 volume (RV703) immediately before the fly-back line disappears.

[White Balance Adjustment]

1. Input all-white signals from the pattern generator.
2. Adjust the BRIGHTNESS and COLOUR controls to the standard level.
3. Adjust the white balance using RV701 (B DRIVE) and RV702 (G DRIVE).

In the following adjustments, the CONTRAST COLOUR and BRIGHTNESS controls are set to normal unless otherwise specified.

4-1. B

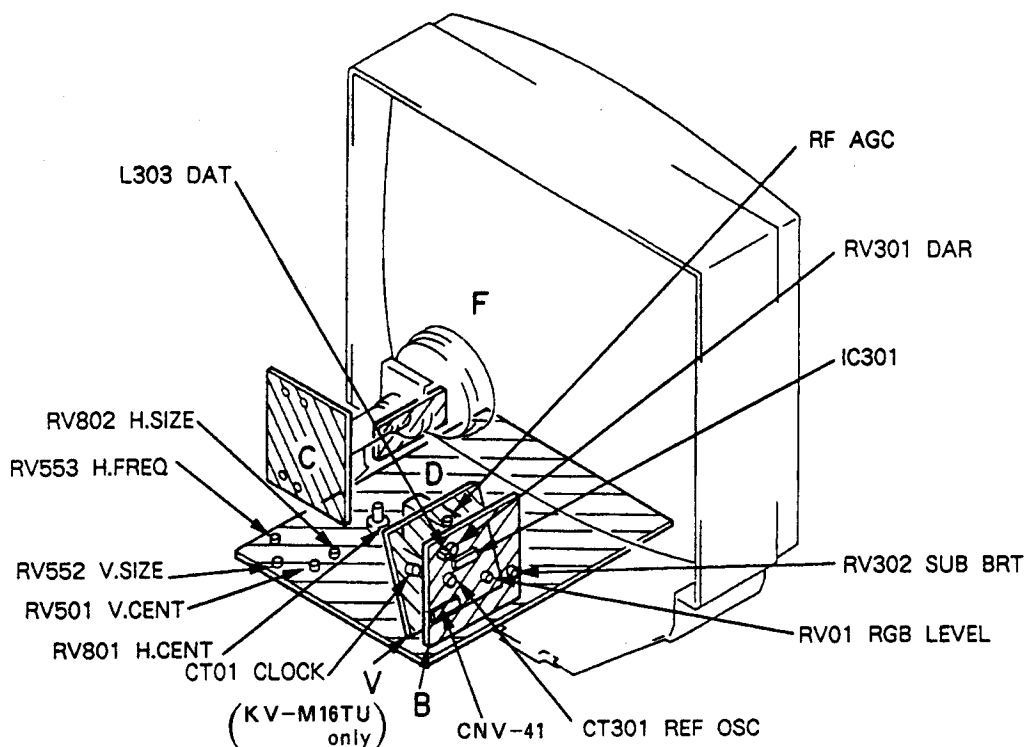
REF O:

1. Inpu
2. Shor
3. Adj
4. Rem

1H DEI

1. Inpu
2. Coni
obse
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3. Adj

SECTION 4 CIRCUIT ADJUSTMENTS



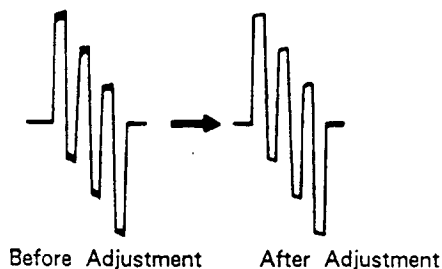
4-1.B BOARD ADJUSTMENTS

REF OSC Adjustment (CT301)

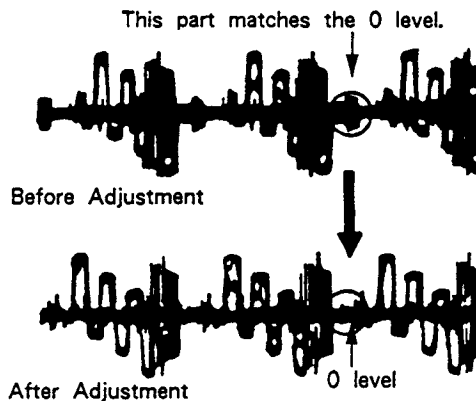
1. Input a PAL COLOUR BAR pattern.
2. Short circuit between pin ① of IC301 and ground.
3. Adjust CT301 to obtain colour synchronization.
4. Remove the jumper wire from IC301.

1H DELAY LINE Adjustment (L303 DAT, RV301 DAR)

1. Input a PAL COLOUR BAR pattern.
2. Connect the oscilloscope to pin ② (B-Y) of IC301 and observe the waveform of the H block on the oscilloscope.
3. Adjust L303 to minimize the double waveform outline.



4. Input a PAL TEST COLOUR BAR pattern.
5. Rotate the RV301 VR and adjust till the ANT PAL part of the waveform matches the 0 level.



6. L303 and RV301 affect each other, so repeat till the conditions of both are met.

SUB BRT Adjustment (RV302)

1. Input a PAL COLOUR BAR signal.
2. Set CONTRAST, BRIGHTNESS, and COLOUR to their minimum values.
3. Slowly rotate SUB BRT (RV302) until the red portion is faintly illuminated.

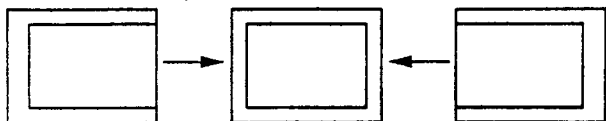
4-2. D BOARD ADJUSTMENTS

TU AGC (RF AGC)

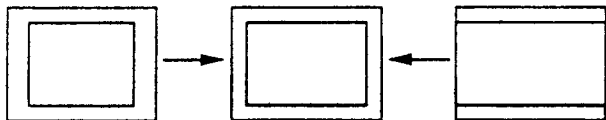
1. Tune in air signals.
2. Adjust AGC VR (RF AGC) so that snow-noise and cross-modulation just disappear from the picture.

H. FREQ (RV553)

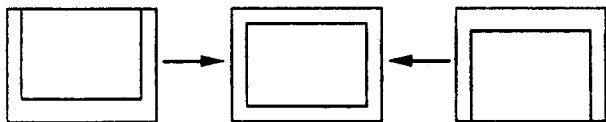
RV801 H.CENT (HORIZONTAL CENTRE)



RV802 H.SIZE (HORIZONTAL SIZE)



RV501 V.CENT (VERTICAL CENTRE)



RV552 V.SIZE (VERTICAL SIZE)



1. Input a PAL COLOUR BAR signal, then connect an electrolytic capacitor (100 μ /16V) between Pin ⑤ and GND of IC551.
2. Adjust RV553 (H. FREQ) to stop scrolling of the picture in the horizontal direction.
3. After adjustment, remove the electrolytic capacitor.



4-3. V BOARD ADJUSTMENTS (KV-M16TU only)

Clock Adjustment (CT01)

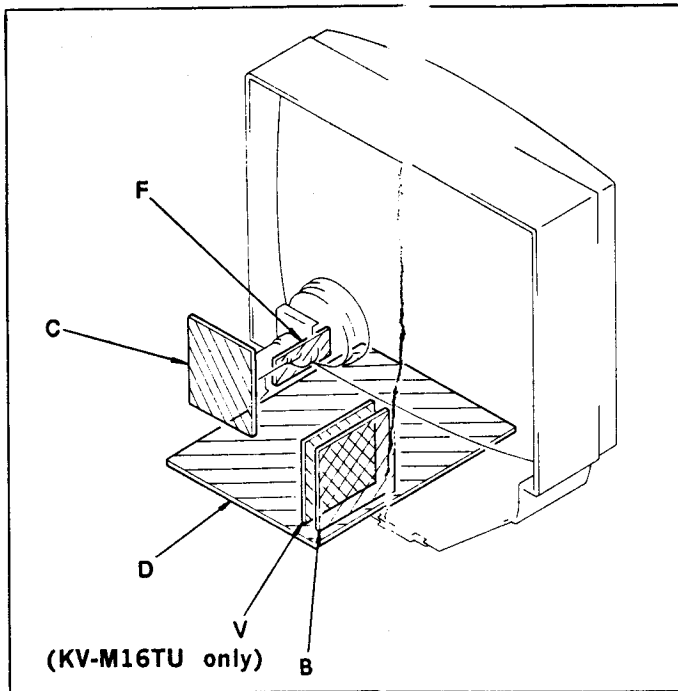
1. Raise pins ② and ③ of CNV41.
2. Set up the TELE TEXT mode.
3. Adjust CT01 to stop the pictures from scrolling.

RGB Level Adjustment (RV01)

1. Set PICTURE to maximum.
2. Adjust RV01 till the RGB output becomes maximum.

SECTION 5 DIADRAM

5-1. CIRCUIT BOARDS LOCATION



Note :

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu F$
50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : 1/4W

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation.
- : adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a $10M\Omega$ digital multimeter.
- Readings are taken with a PAL colour-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- : B+ line
- : signal path.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE WIREWOUND
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE

5-2. SCHEMATIC DIAGRAM (1)

1

2

3

A

B

C

D

E

F

G

H

I

J

K

5-2. SCHEMATIC DIAGRAM (1)

A

B

C

D

E**F**

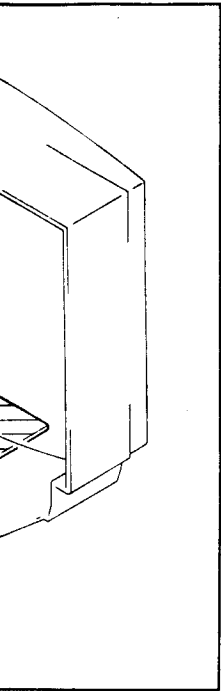
G

H

1

J

K



se noted. pF : $\mu\mu F$
for electrolytics.
have one for rating

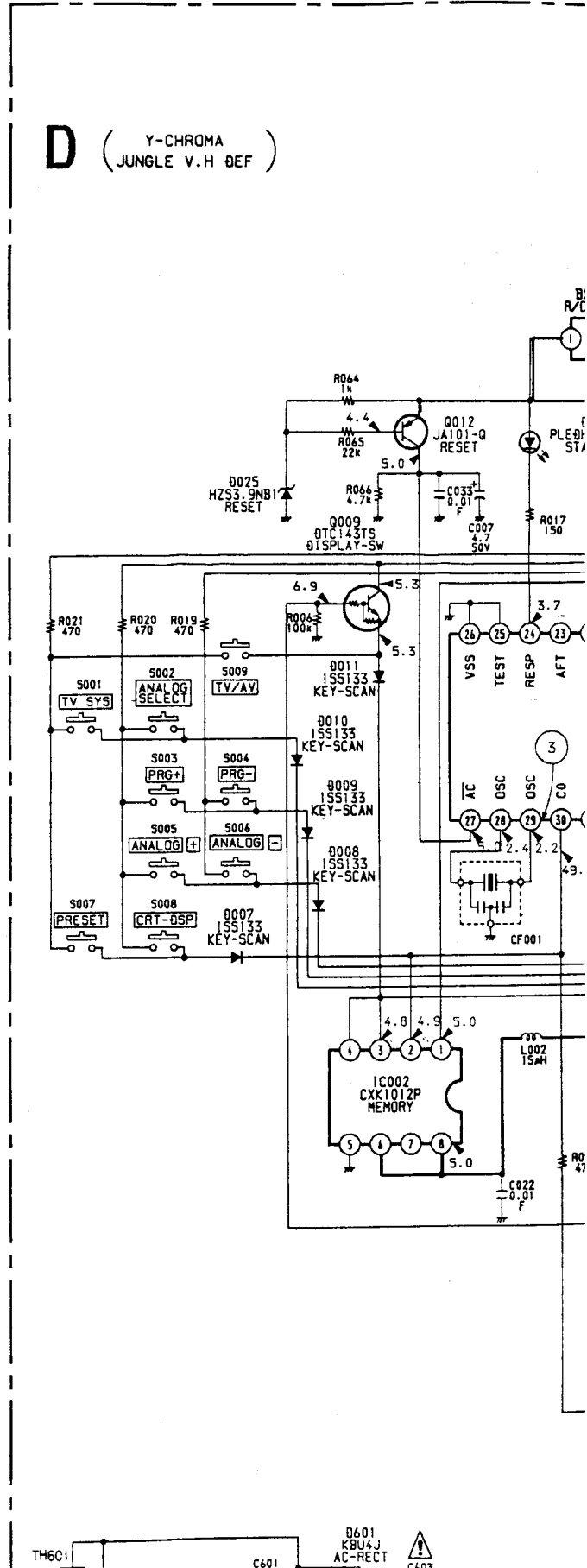
ve characteristic

normal production

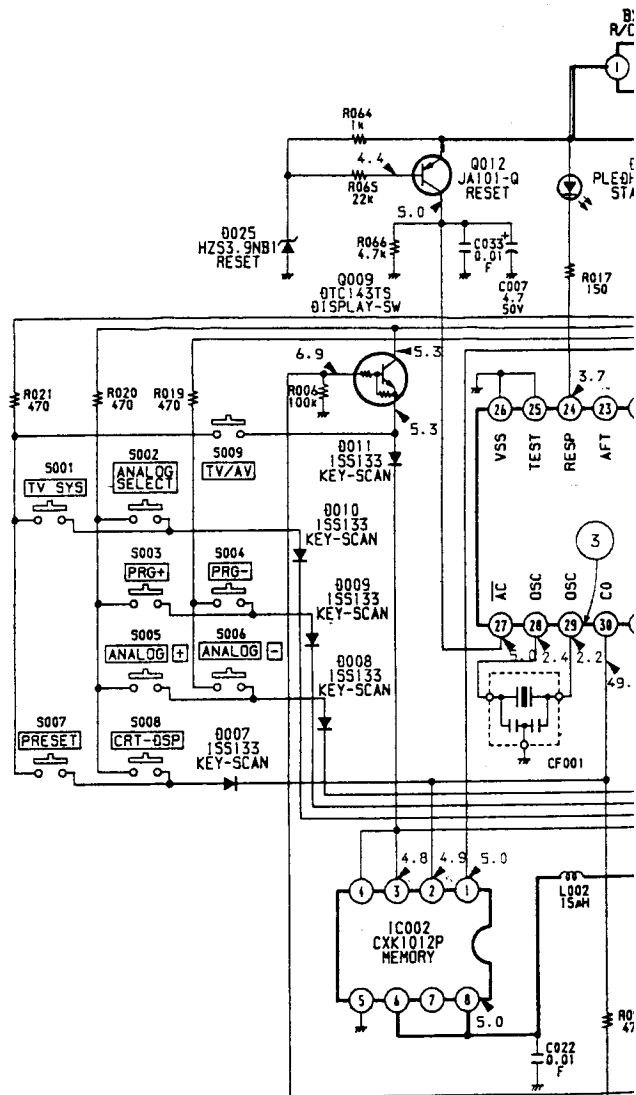
LE CARBON
LE FUSIBLE
LE WIREWOUND
LE CEMENT
TOR

NE

LYESTER
LYPROPYLENE



D (Y-CHROMA
JUNGLE V.H DEF)



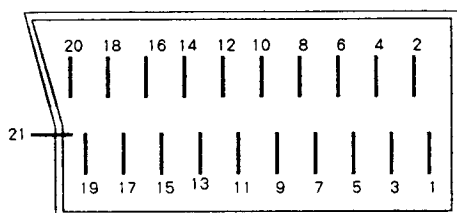
TH6C1

0601
KBU4J
AC-RECT



C403

21-pin Euro Connector Configuration




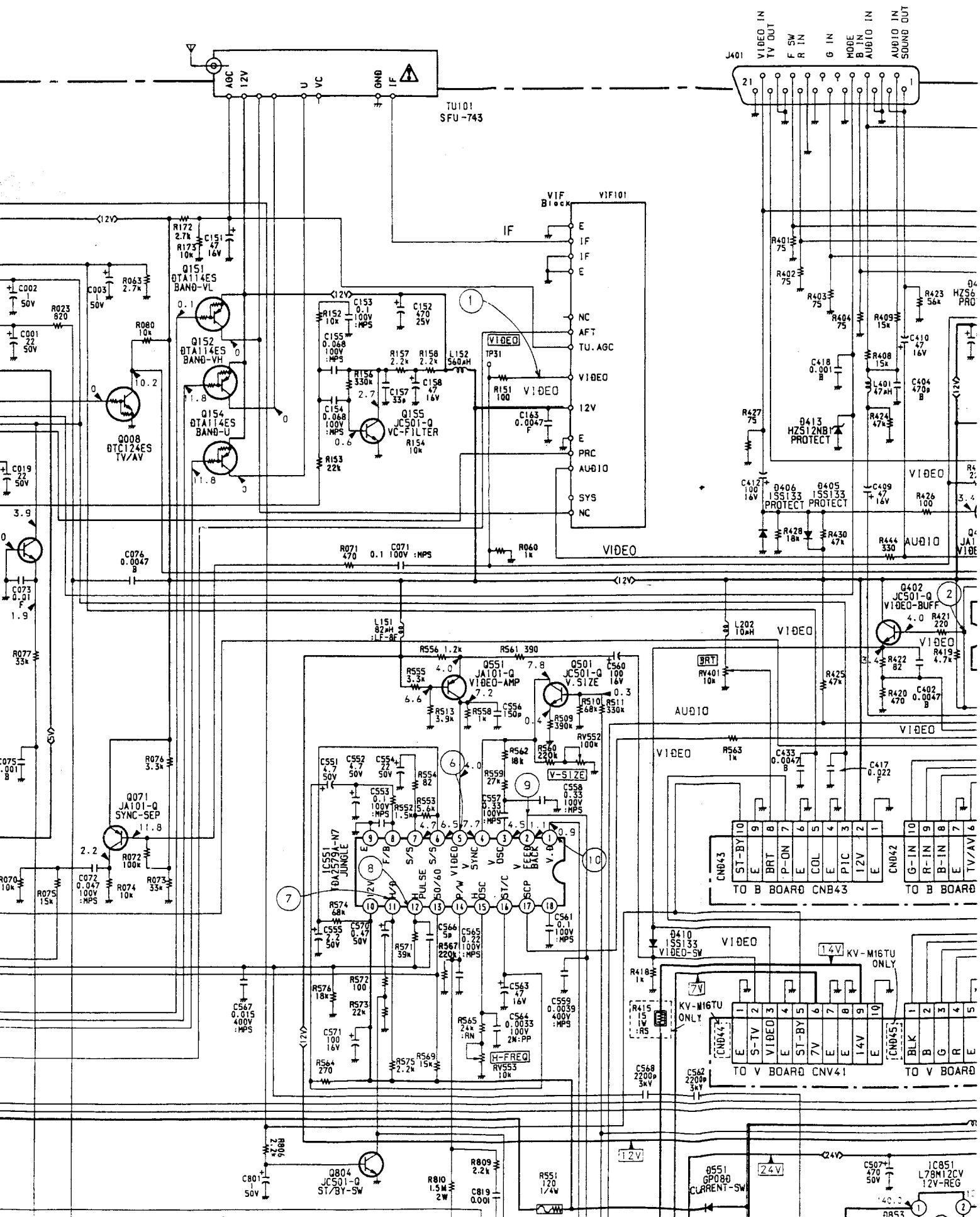
PIN	SIGNAL	SPECIFICATION
1	Audio output	0.5Vrms/1kilohm or less
2	Audio input	0.5Vrms/10kilohms or more
3	Audio output	0.5Vrms/1kilohm or less
4	Earth (audio)	
5	Earth (B-input)	
6	Audio input	0.5Vrms/10kilohms or more
7	B-input	0.7Vp-p/75ohms
8	Function switching	9.5V to 12V
9	Earth (G-input)	
10		
11	G-input	0.7Vp-p/75ohms
12		
13	Earth (R-input)	
14	Earth (blanking)	
15	R-input	0.7Vp-p/75ohms
16	Fast blanking	1V to 3V/75ohms
17	Earth (video)	
18	Earth (fast blanking)	
19	Video output	1Vp-p/75ohms
20	Video input	1Vp-p/75ohms
21	Screening plug	

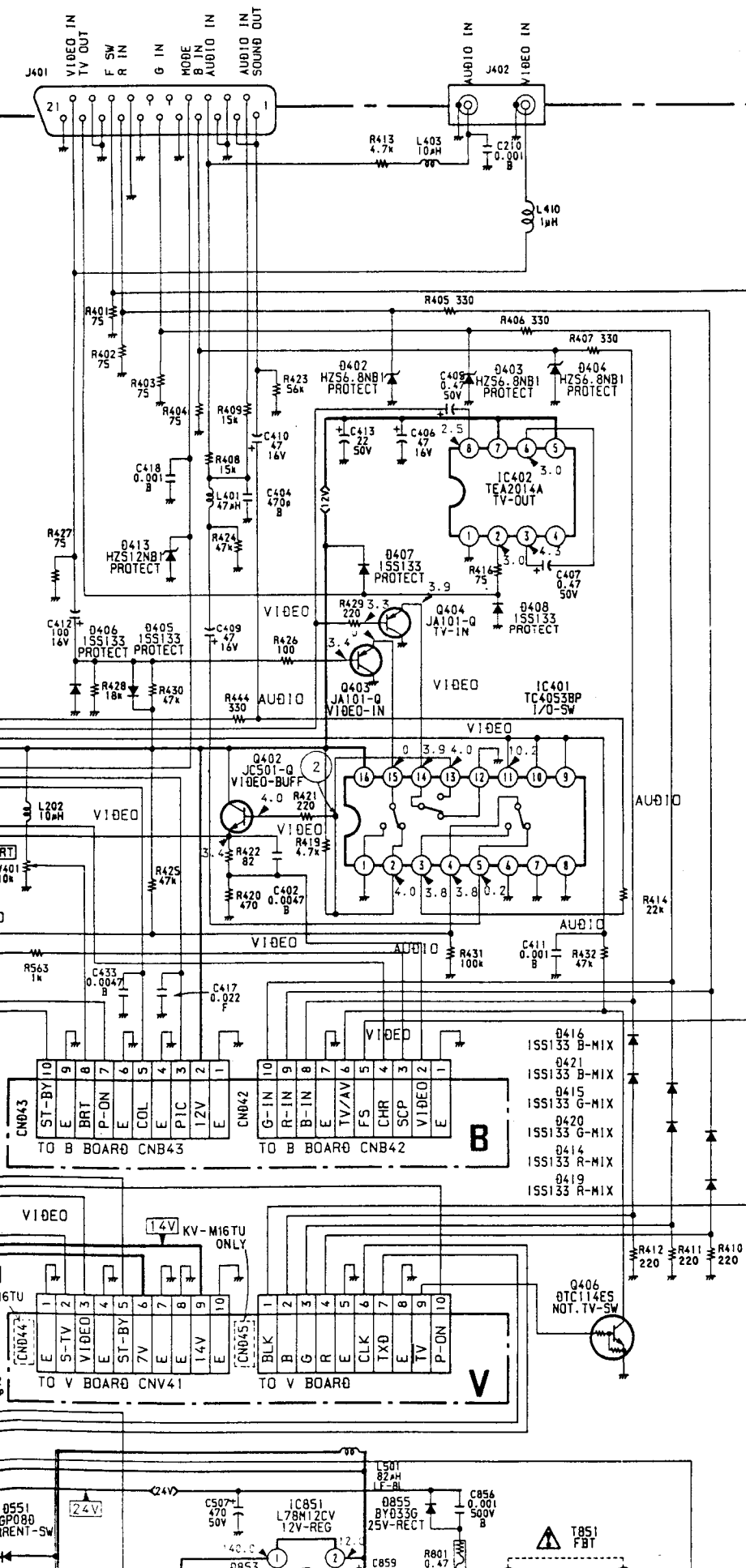
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





SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.






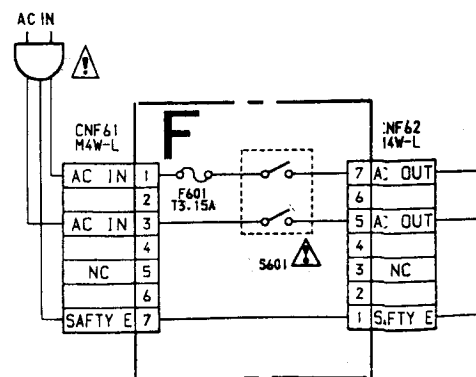
Pitch : 5mm
Rating electrical power : 1/4W

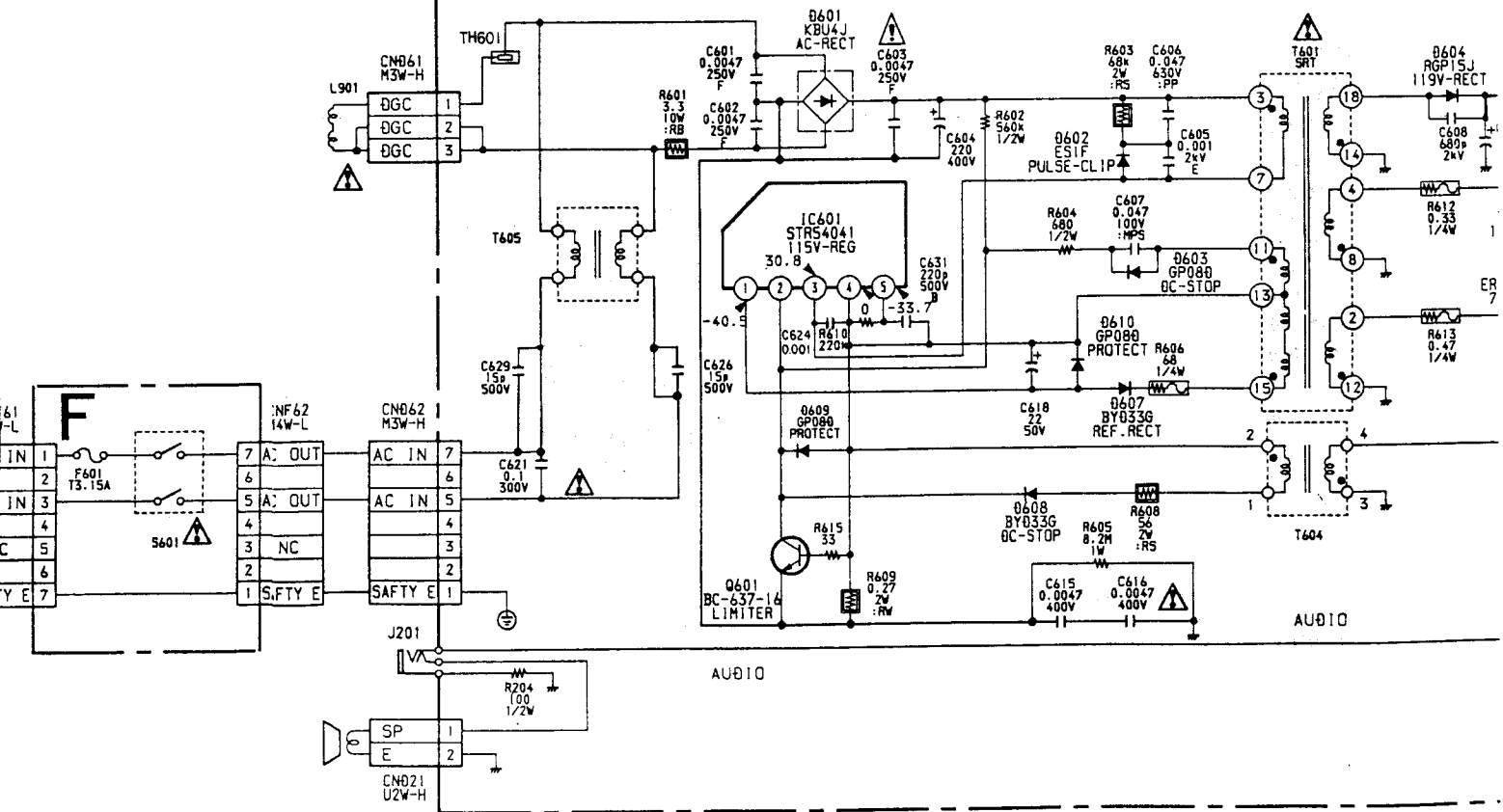
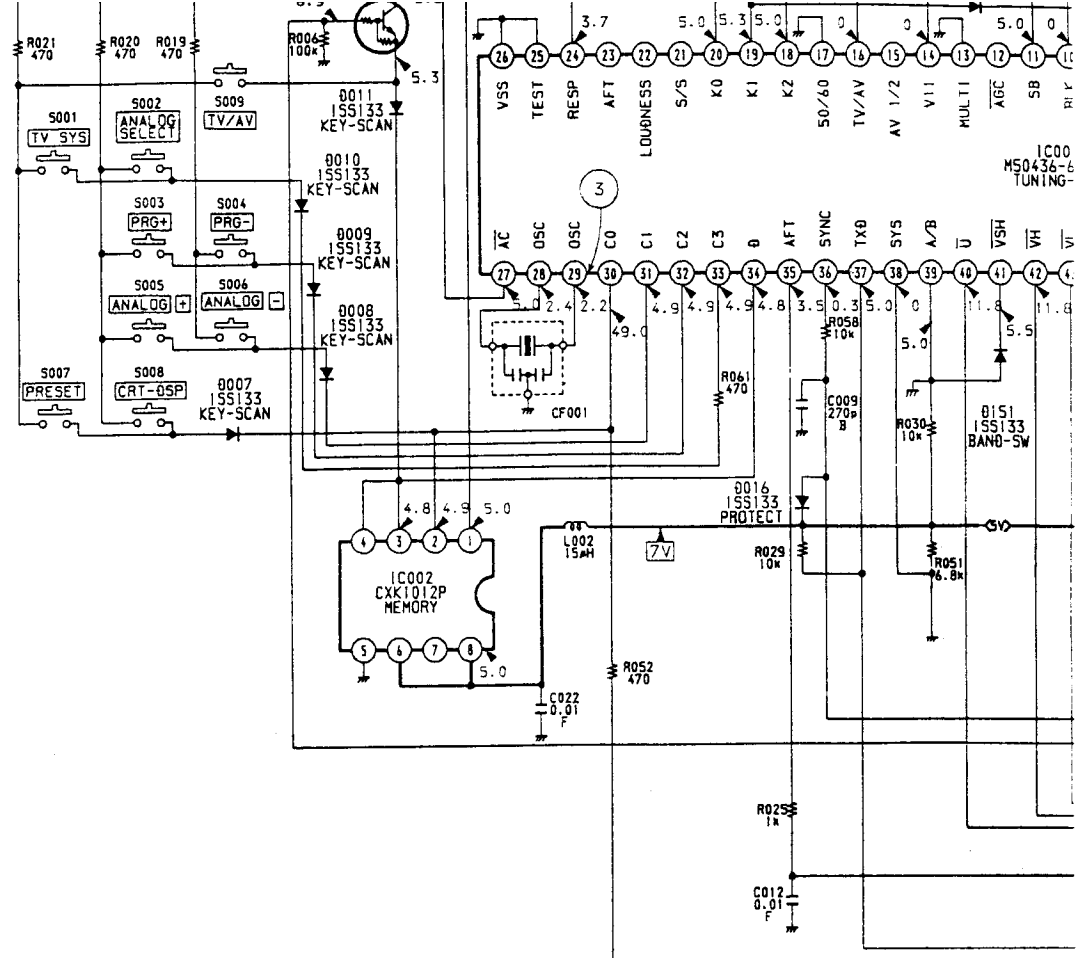
- All resistors are in ohms.
-  : nonflammable resistor.
-  : fusible resistor.
-  : internal component.
-  : panel designation.
-  : adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10MΩ digital multimeter.
- Readings are taken with a PAL colour-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
-  : B+ line
-  : signal path.

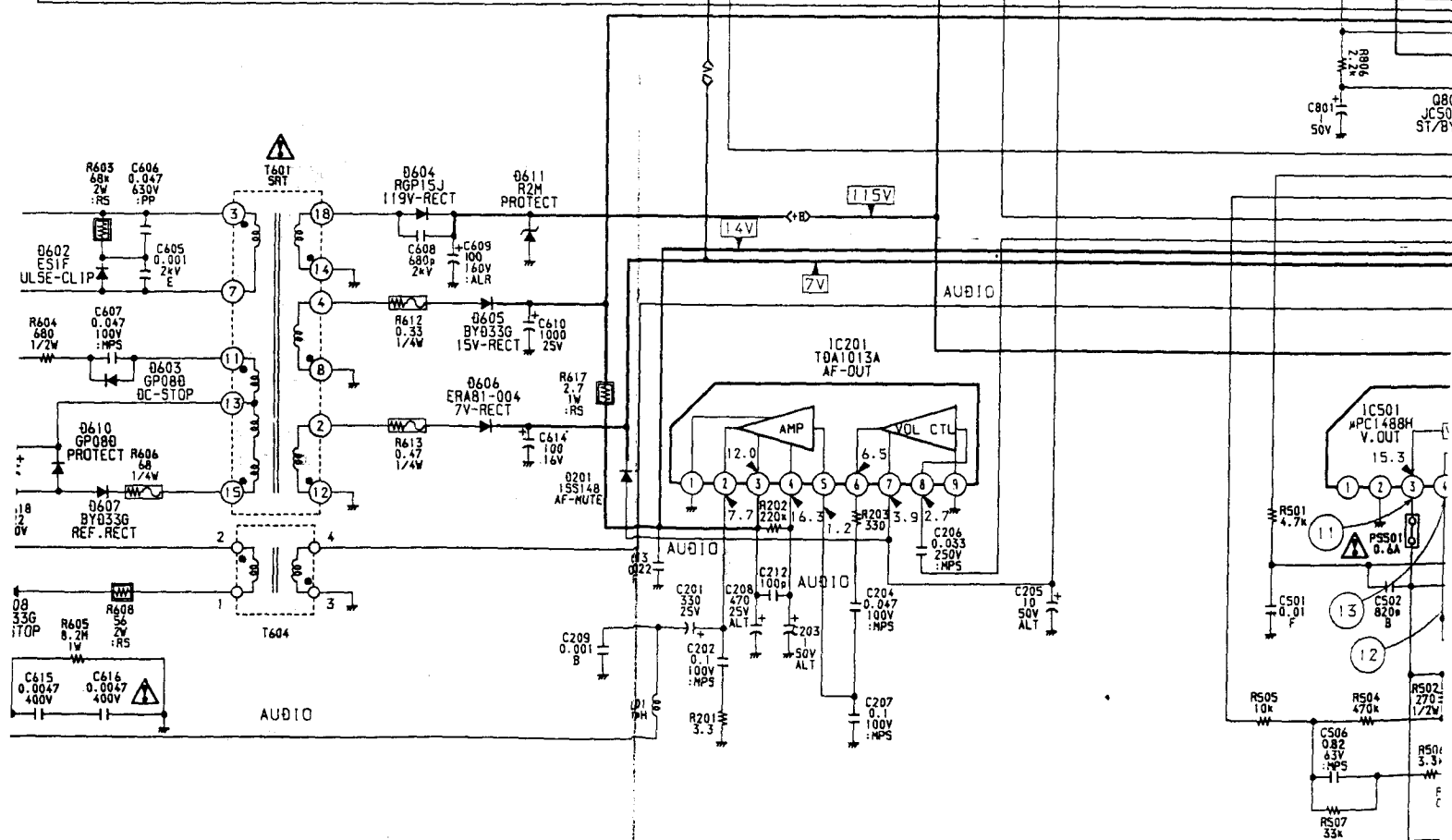
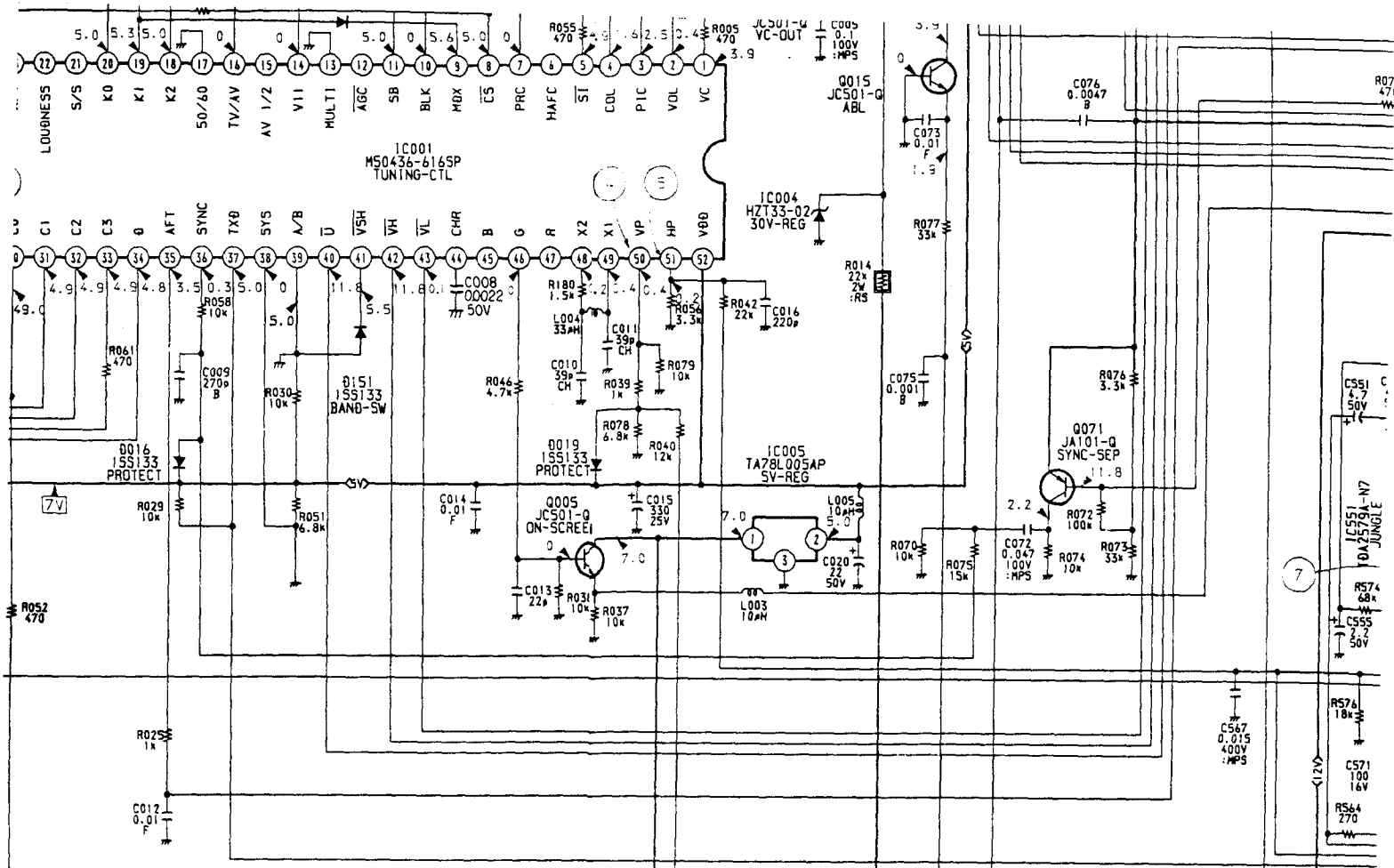
Reference information

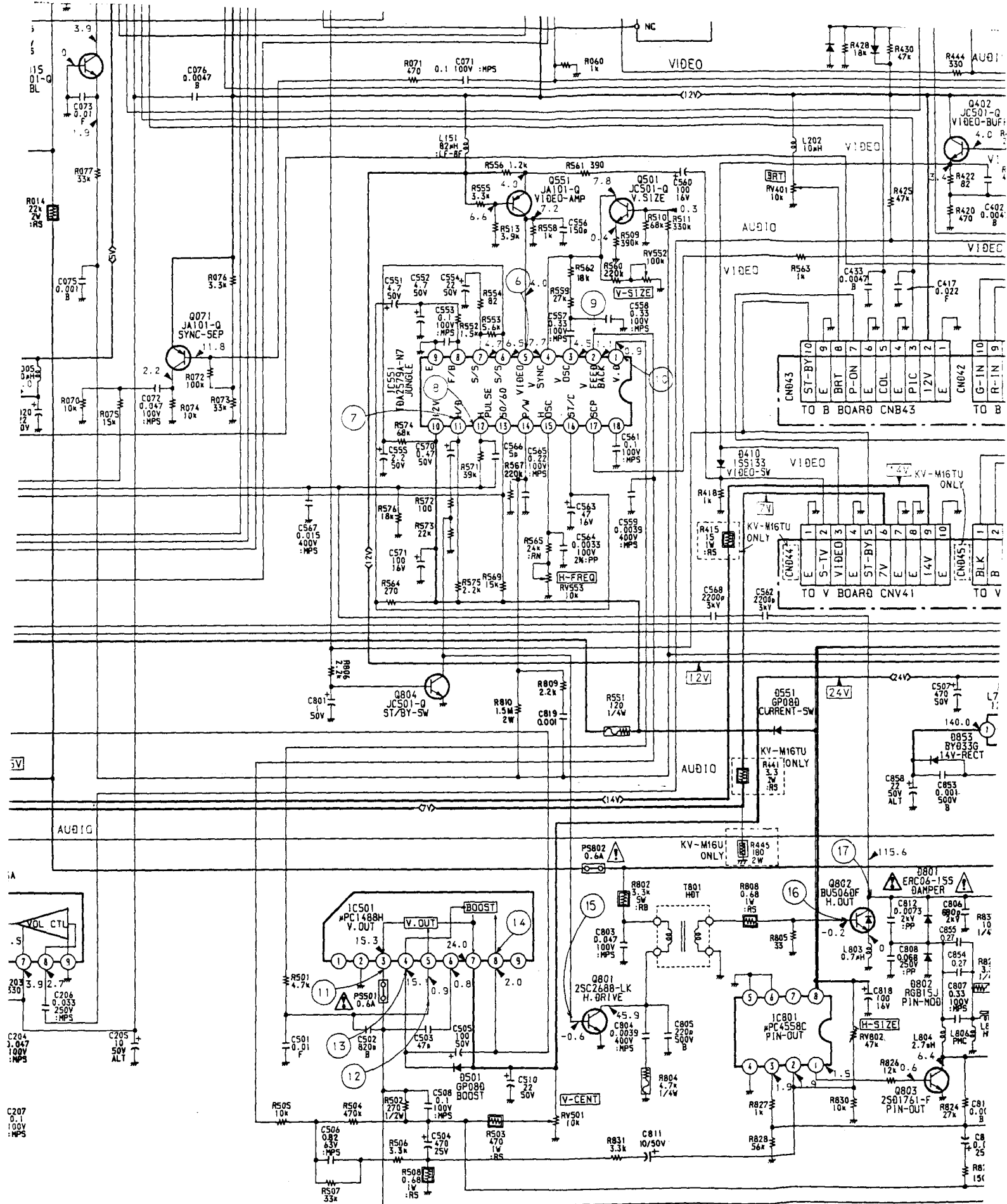
RESISTOR	: RN	METAL FILM
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	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ABL	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

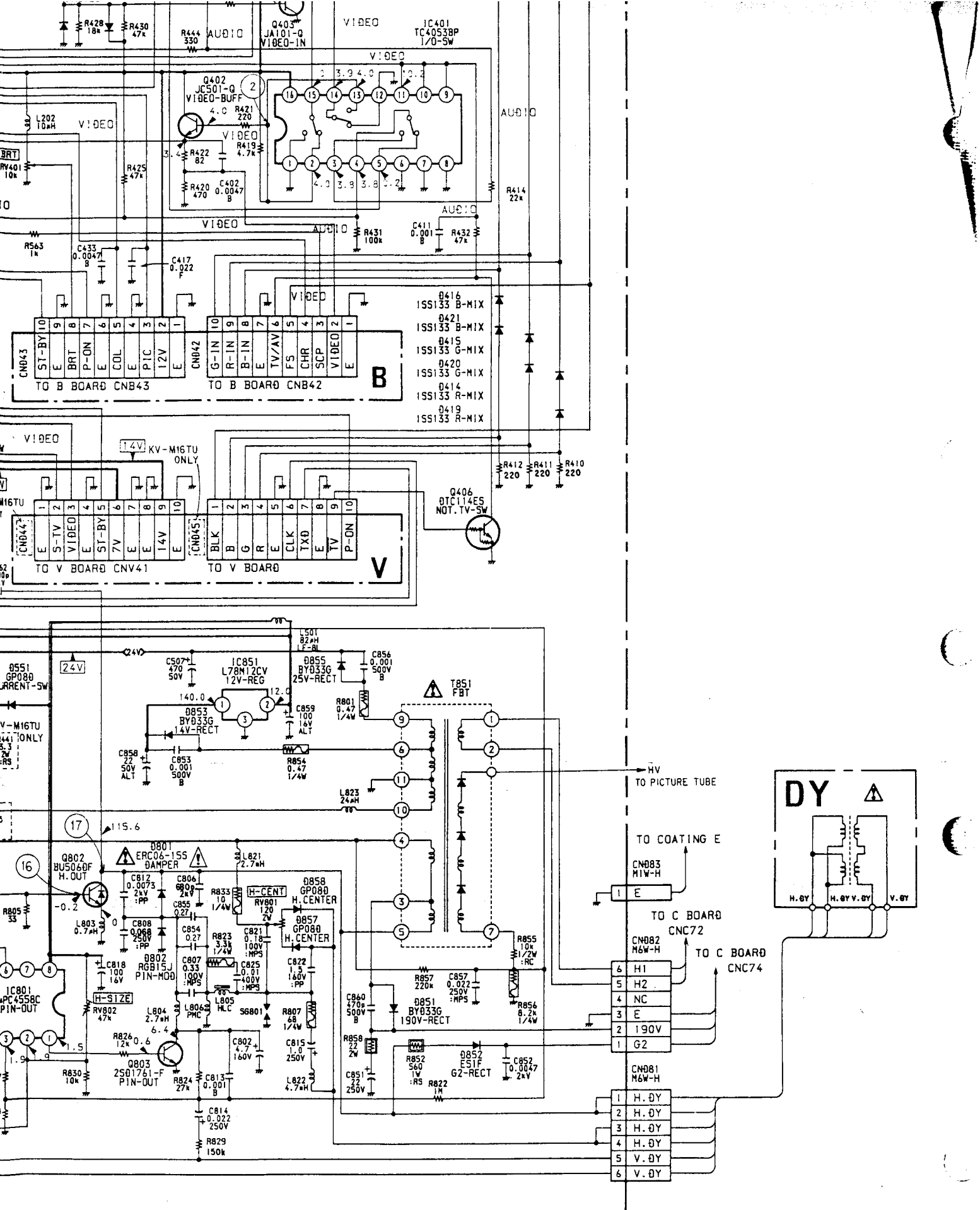
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.





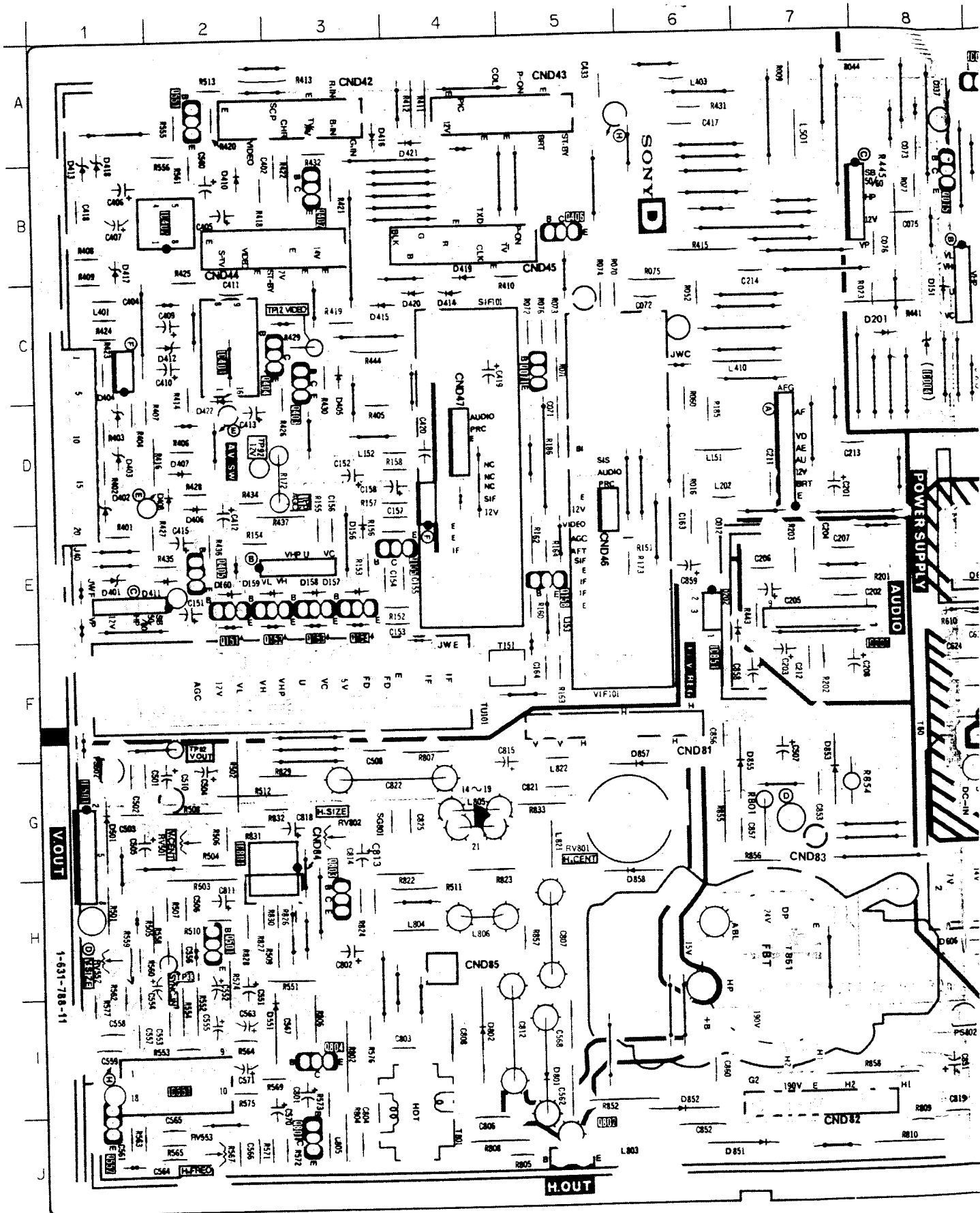






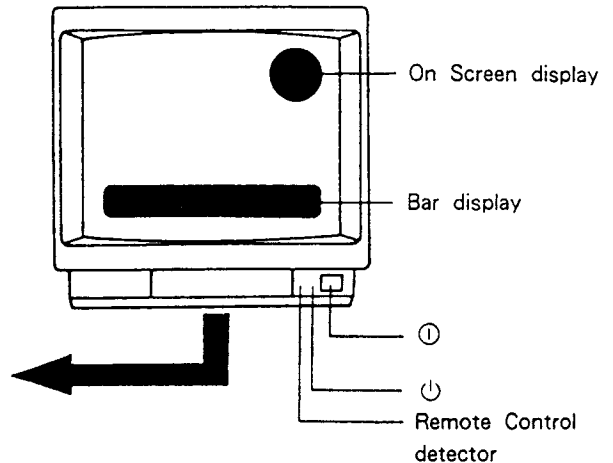
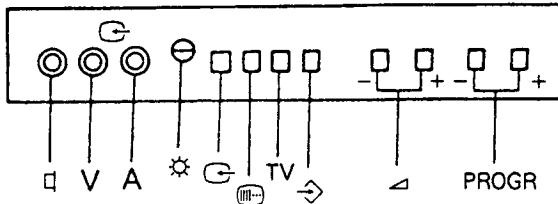
5-3. PRINTED WIRING BOARDS

- D Board -



SECTION 1 GENERAL

1-1. FUNCTION OF CONTROLS



On the set

- On-screen display**
Indicates programme numbers and input mode; . Press the button to make the display appear on the screen, and again to make it disappear. See also "On the Remote Commander" below.

Bar display
Indicates the level of the user controls when they are adjusted; volume, contrast or colour.
- power switch**
To cut off the main electricity supply, press this switch. Ensure correct operation by pressing the switch fully.

Remote control detector
Point the Remote Commander towards this detector.
- standby indicator**
Lights up brightly when the set is in standby mode.

Inside the panel

- earphone jack (minijack mono)**

preset button

analogue select buttons
Press repeatedly until the on-screen display of the required adjustment appears (volume, contrast or colour). Adjust by using the + or - buttons.

input button
Press this button to view the input picture coming in through the 21-pin connector or the connectors on the front panel. "" appears on the screen. Press again or PROGR + / - to return to the TV mode.

Extra equipment can be connected to the TV using both the 21-pin connector and the input connectors, but only one piece of equipment besides the TV should be turned on at one time.

brightness control
Turn clockwise for more brightness or anticlockwise for less.

Volume adjustment buttons + / -
Use these buttons to adjust the volume to the desired level.

PROGR + / - buttons
Use to scan the available channels. To turn on the TV from the standby mode without using the remote commander, press any of these buttons.

Video/Audio input connectors (phono)
Connect to a VTR, micro-computer, etc.

 - o V (Yellow) video input
 - o A (Black) audio input (mono)

Note

The TV button does not function on this set.

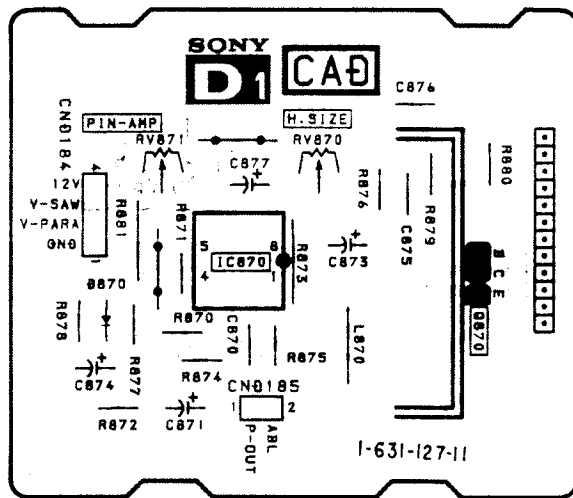
D1

[PIN-OUT]

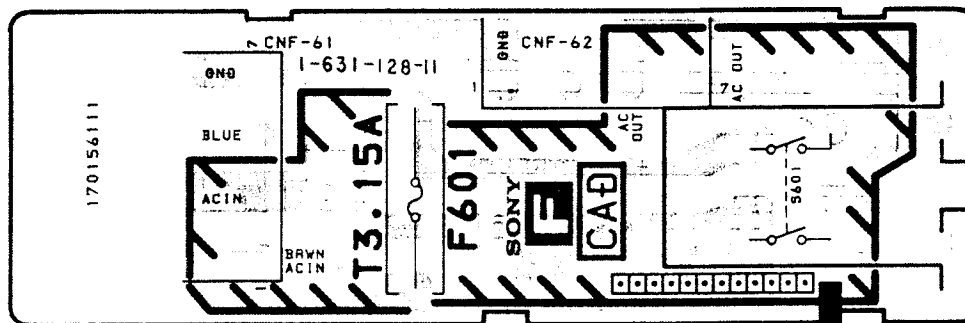
F

[POWER]

— D1 Board —



— F Board —



it indicated as left contains high voltage of over
Care must be paid to prevent an electric shock in
n or repairing.

C BOARD WAVEFORMS

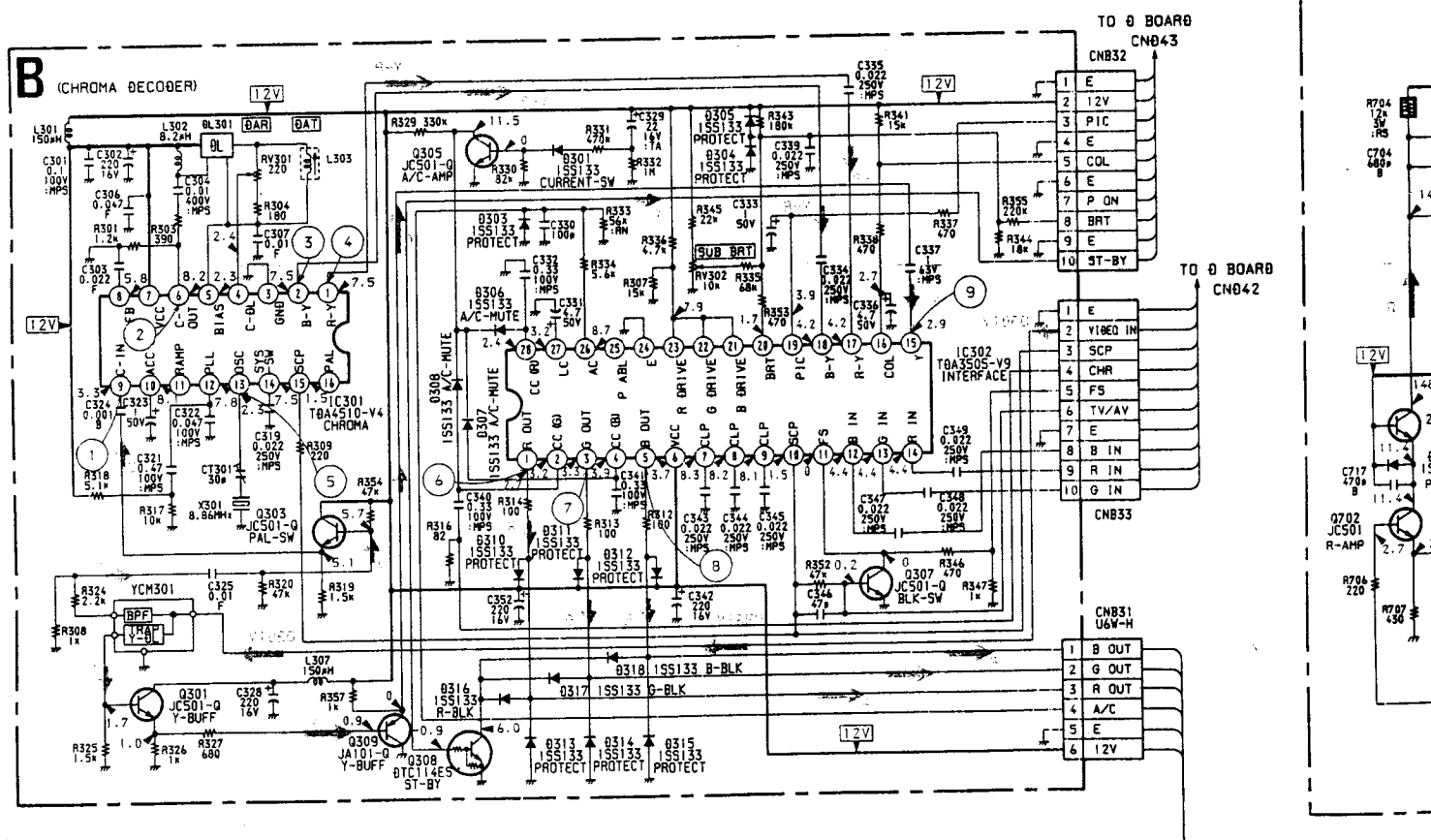
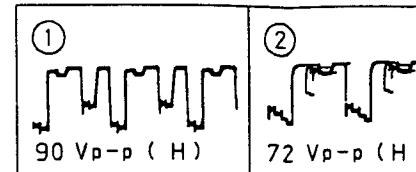
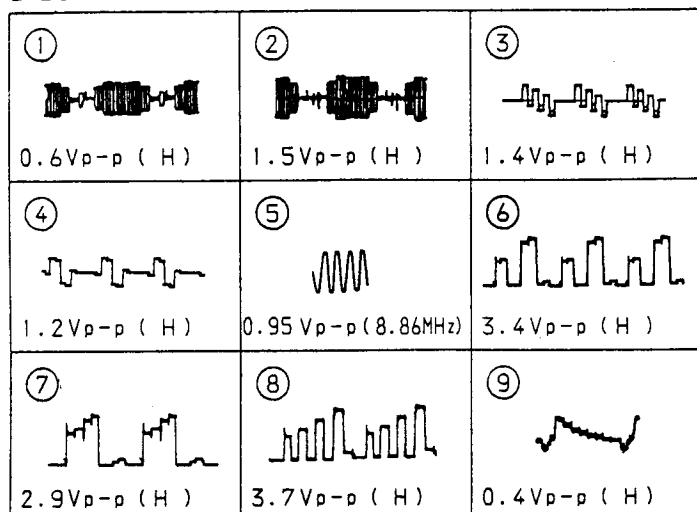
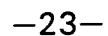


Figure 10 displays four examples of waveforms, labeled 1 through 4, showing different pulse shapes and amplitudes. Each waveform is labeled with its peak-to-peak voltage (V_{p-p}) and a unit (H).

- Waveform 1: $90 V_{p-p} (H)$
- Waveform 2: $72 V_{p-p} (H)$
- Waveform 3: $80 V_{p-p} (H)$
- Waveform 4: $22 V_{p-p} (H)$



10

11

12

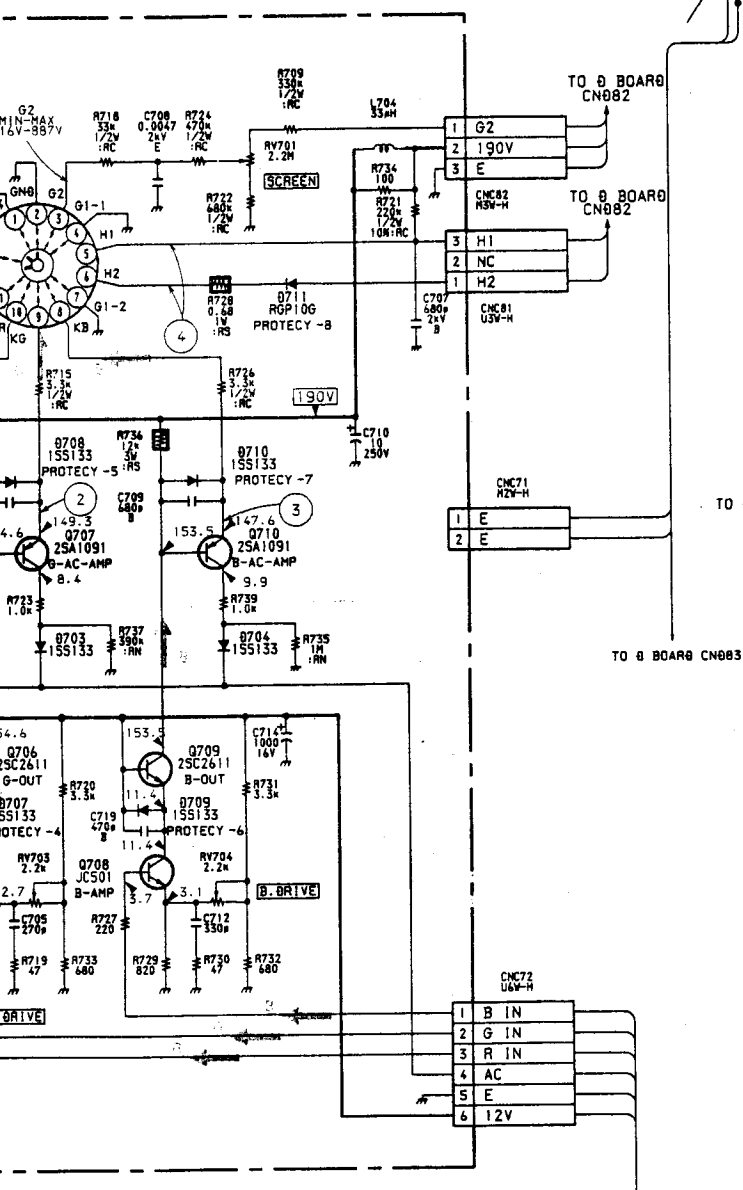
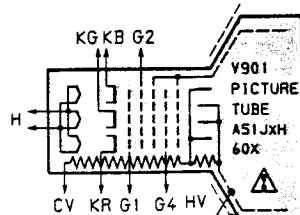
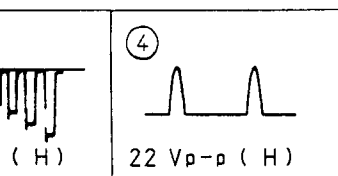
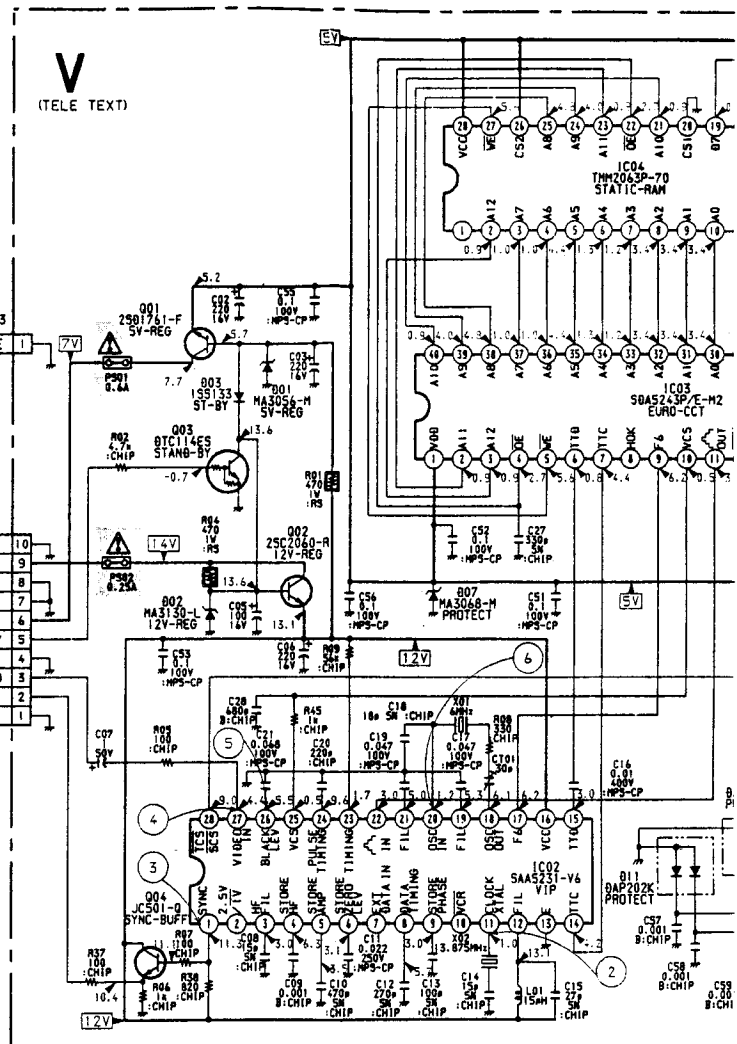
13

14

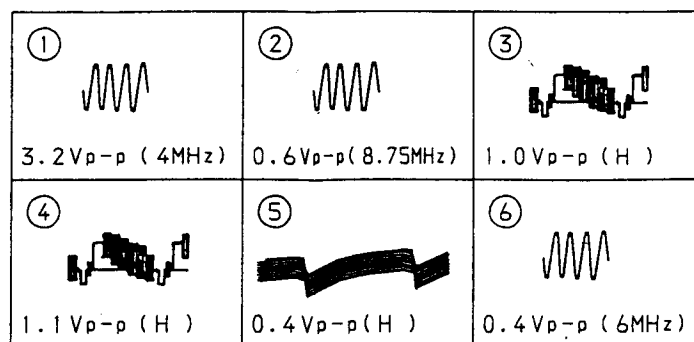
15

16

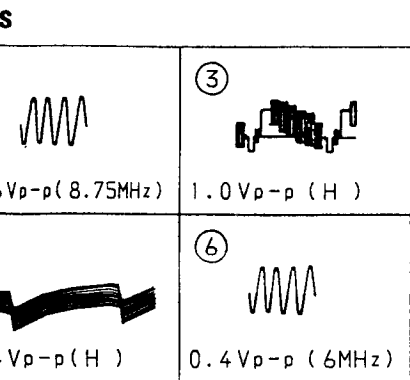
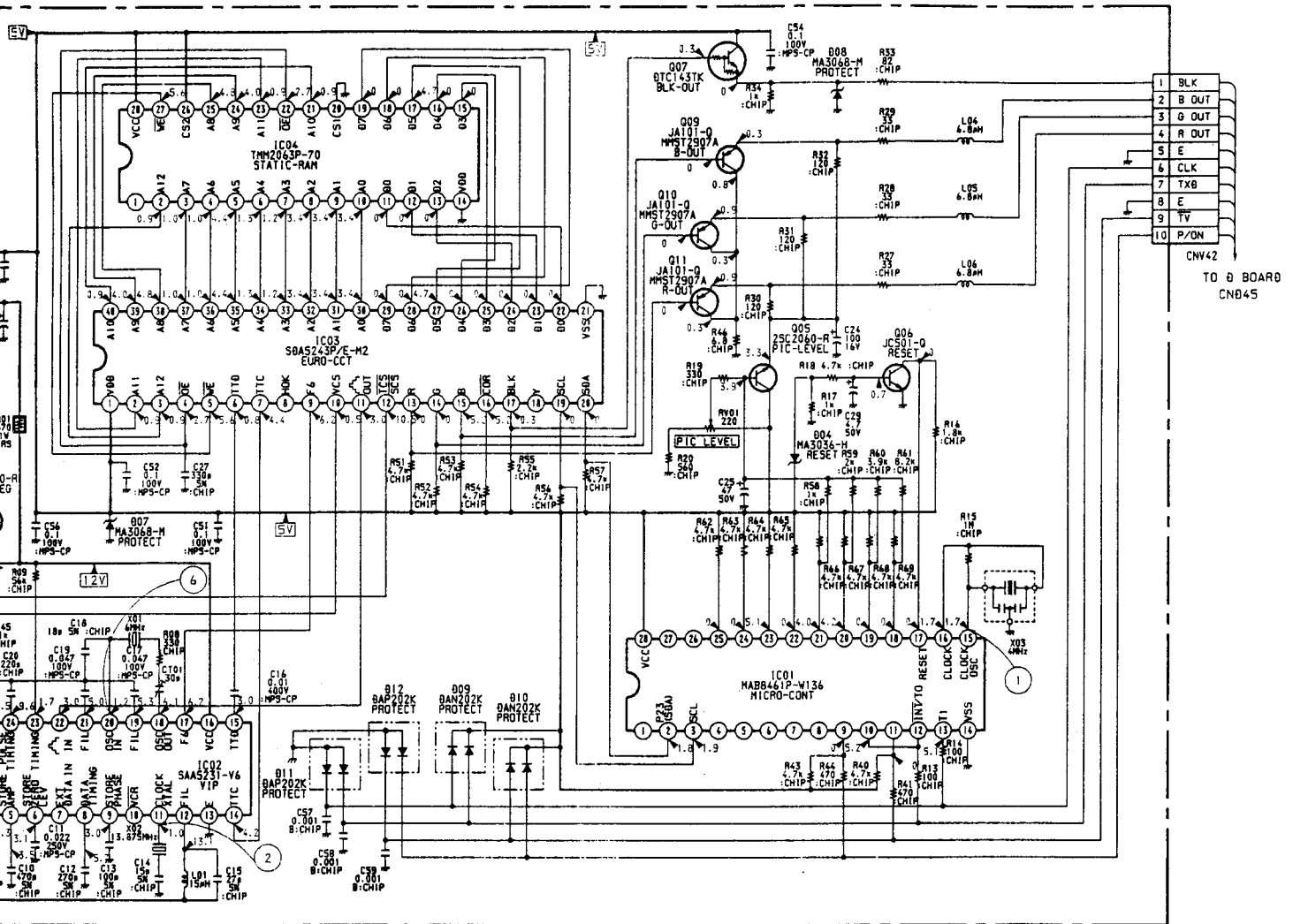
17

V
(TELE TEXT)

V BOARD WAVEFORMS



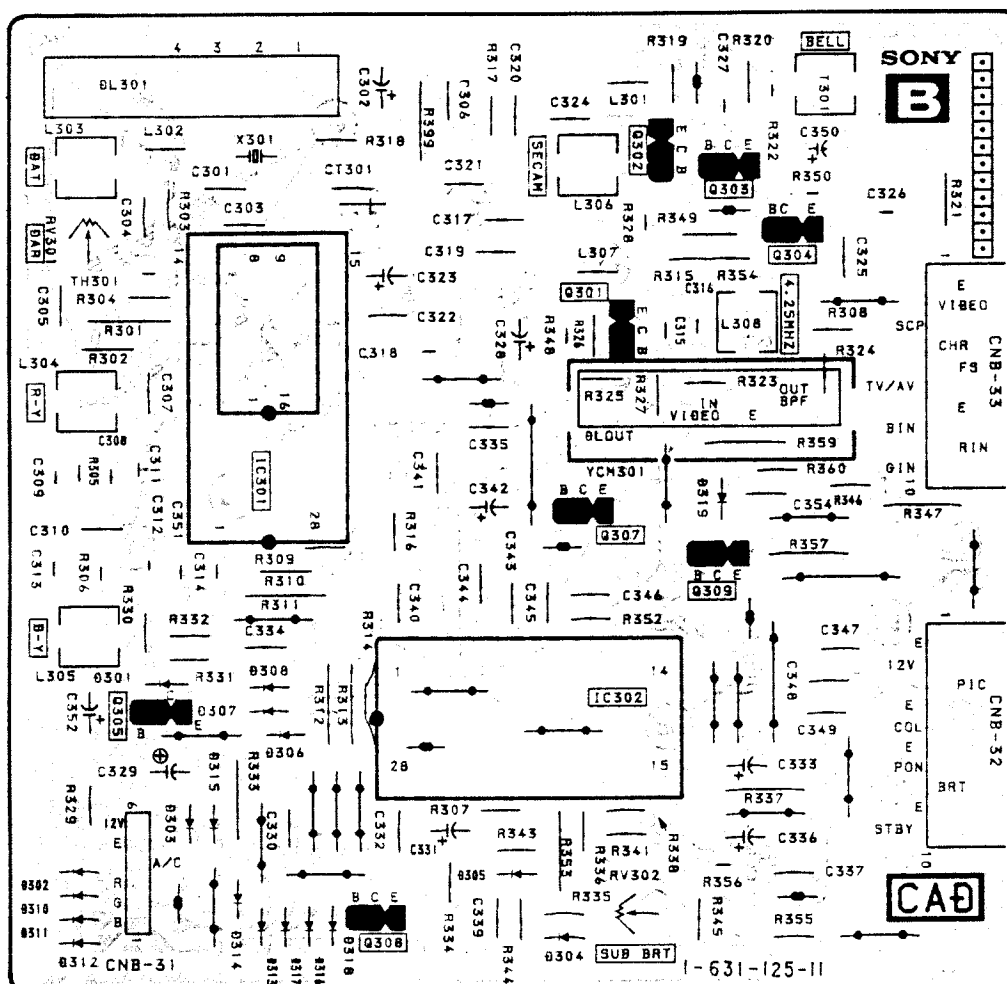
16 17 18 19 20 21 22 23



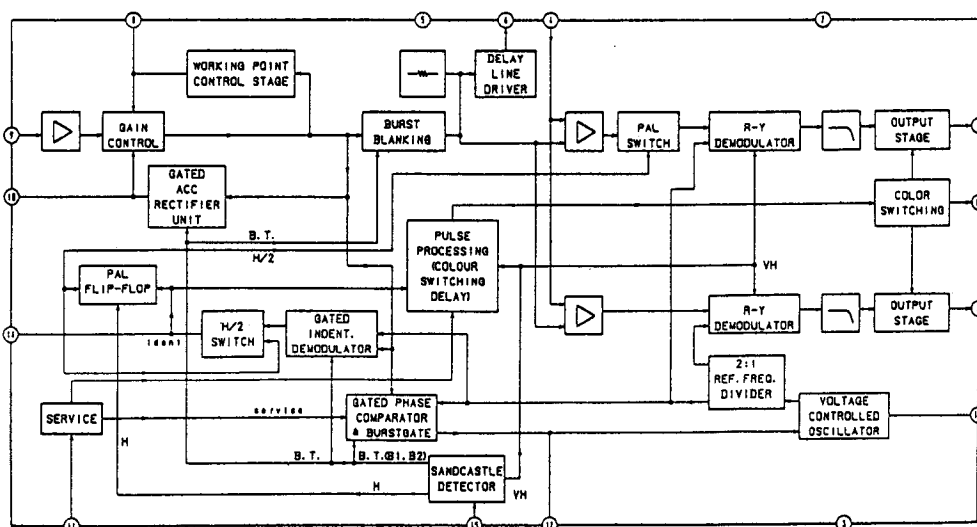
B

[Y/C PROTECTOR]

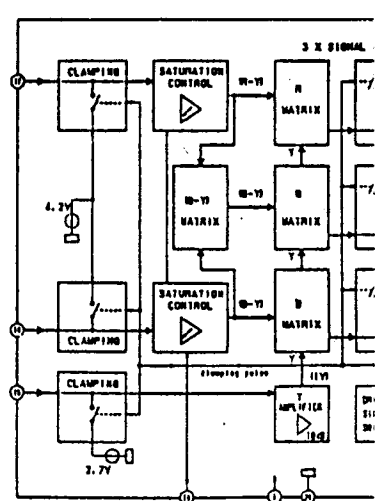
- B Board -



B BOARD IC301 TDA4510



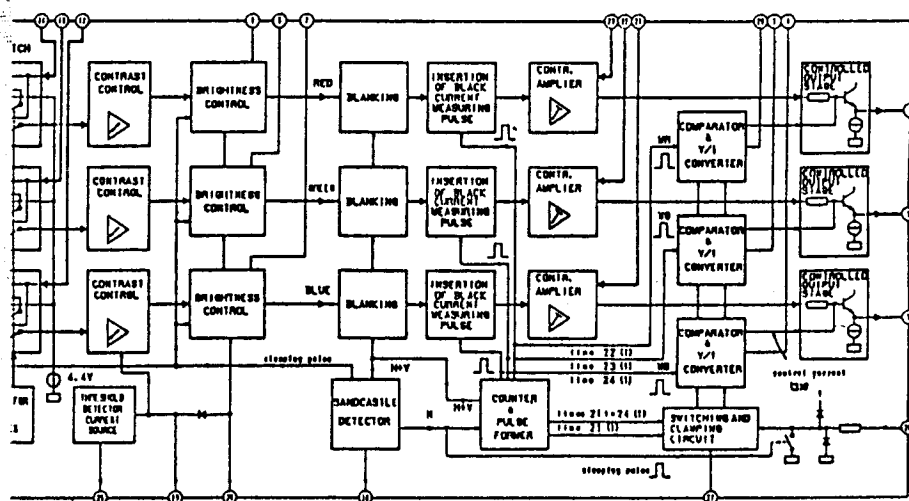
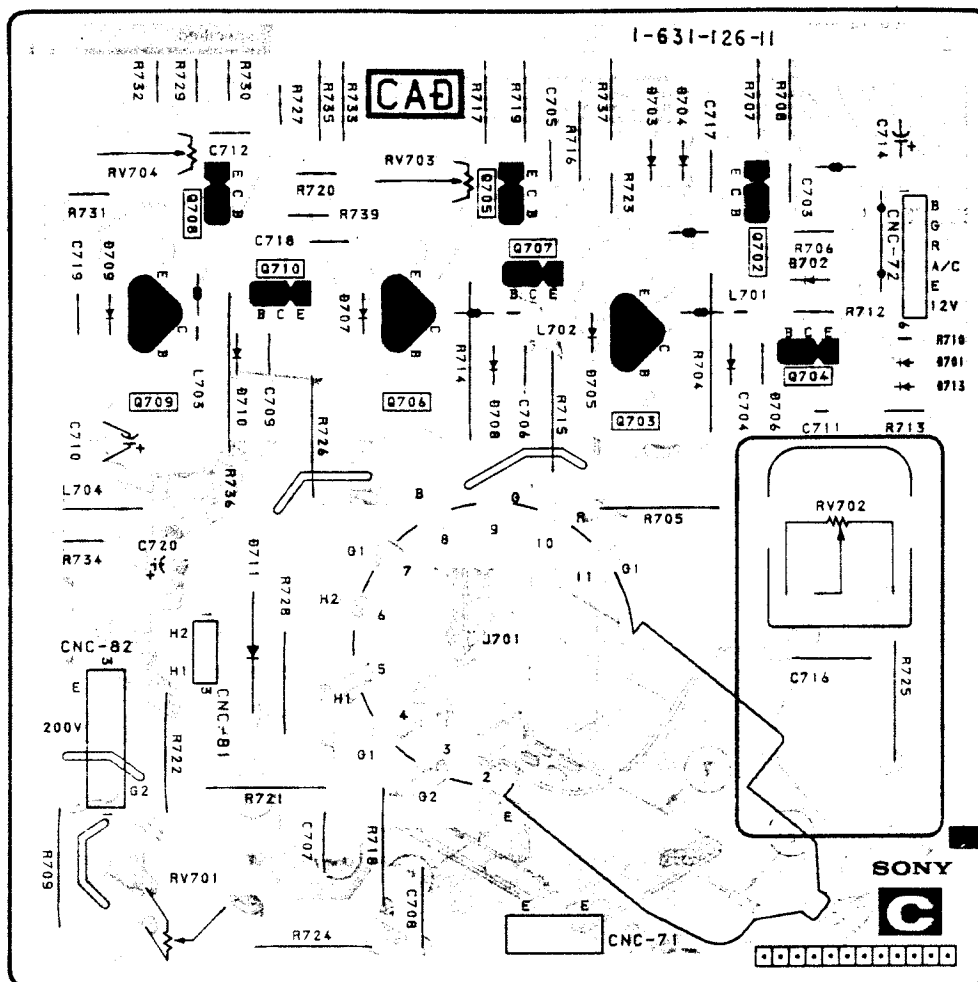
B BOARD IC302 TDA3505-V9



C

[R.G.B. OUT]

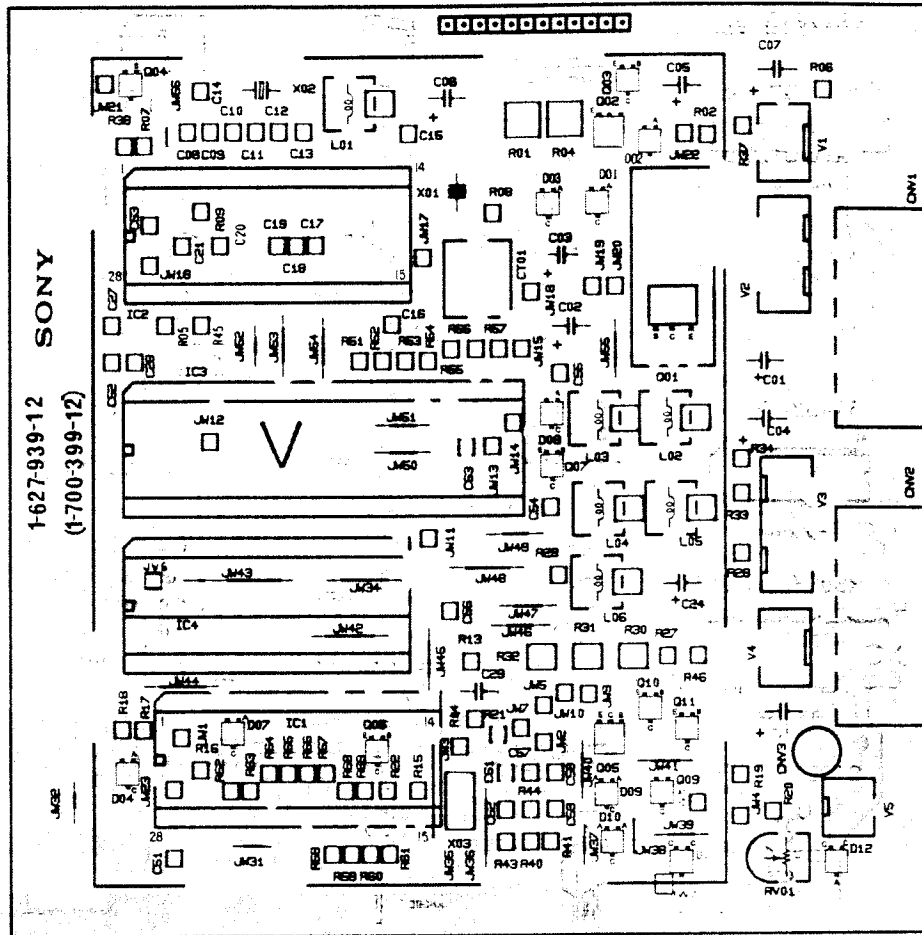
— C Board —



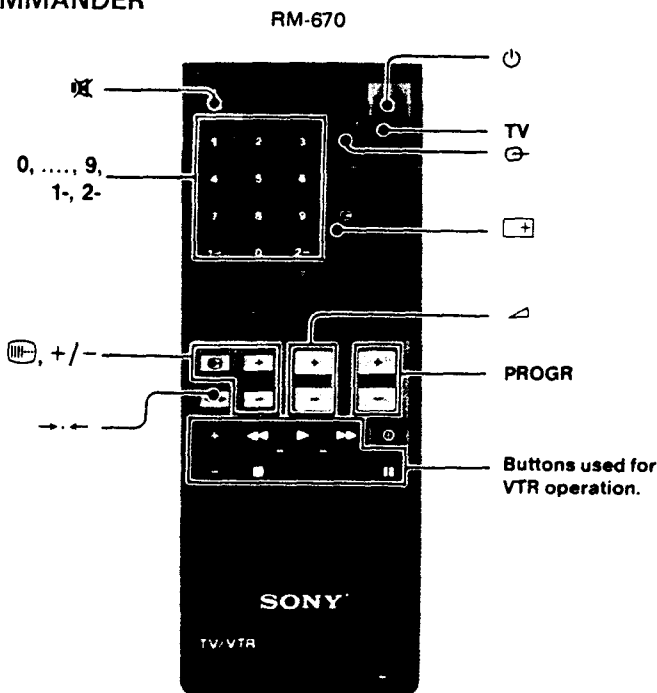


[TELE TEXT]

— V Board — (KV-M2121U ONLY)



1-2. ON THE REMOTE COMMANDER



To operate the Commander, point it toward the remote control detector.

☒ mute button

Use to mute the sound. Press $\triangle +$ or $- \triangle$ to restore the sound.

0, ..., 9, 1-, 2- buttons

To select:

programme 15, press 1- and 5,
programme 25, press 2- and 5.

→ • ← Reset button

Press to return colour and contrast to factory-set levels.

⏻ standby button

Press to select standby mode. Use this facility to turn off the set for short periods of time.

To return to TV mode, press TV or the programme number on the Remote Commander; there will be a slight delay before the picture is restored. If the main power is turned off when in standby mode, the indicator will take 2 to 6 seconds to go off.

⬢ On-screen display button

Indicate the programme number and the input mode. this button to make the display appear on the screen; press the button again to make it disappear.

TV button

Press to change to the TV mode from standby, \square or Teletext modes.

PROGR +/ - buttons

Use to scan the available channels.

$\triangle + / -$ volume buttons

⊗ colour buttons

⦿ contrast buttons

⬢ input button

Press to view the input picture from the \square connectors. "⬢" appears on the screen. Press PROGR +/ - or a programme number key to return the TV mode.

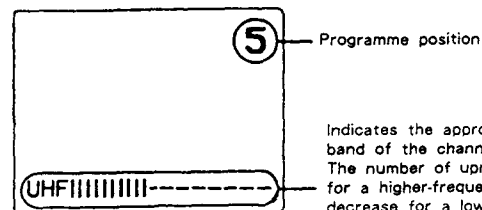
1-3. TO PRESET CHANNELS

Use the buttons inside the panel. To open the panel, push and pull the centre.

Manual Programming

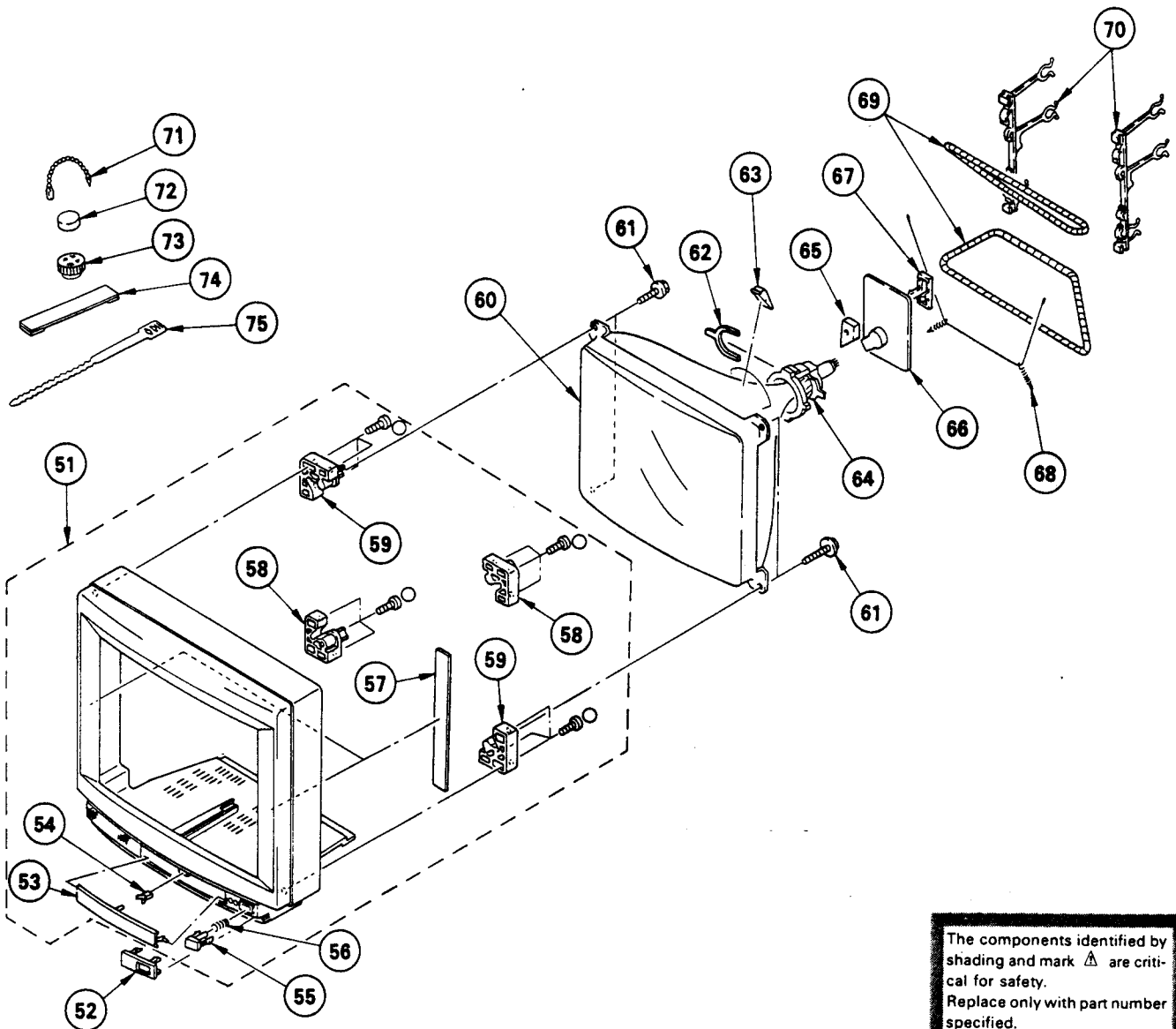
To Tune in a Channel in Any Desired Programme Position

- 1 Press \diamond (preset) to select the presetting mode.
- 2 Select the desired programme position by using the PROGR + or - button.
- 3 Press $\triangle +$ or $- \triangle$ repeatedly until the TV programme of the desired channel appears.
Repeat steps 2 and 3 for all desired channels.
- 4 Press \diamond again to return to the TV mode.



6-2. PICTURE TUBE

○ : BVTP4 x 20 7-685-664-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	X-4389-325-1	BEZNET ASSY (BLACK)	1,53-59	63	3-703-961-01	SPACER, DY	
	X-4389-325-2	BEZNET ASSY (WHITE)	1,53-59	64 Δ	1-451-295-31	DEFLECTION YOKE (Y21PFA2)	
52	4-389-373-02	PLATE, ORNAMENTAL (KV-M2121U ONLY)		65	*4-379-167-01	COVER (MAIN), CV	
	4-389-373-12	PLATE, ORNAMENTAL (KV-M2120U ONLY)		66	*A-1330-992-A	C BOARD, COMPLETE	
53	4-389-377-01	DOOR, CONTROL		67	*4-379-160-01	COVER (REAR LID), CV	
54	4-386-710-01	CATCHER, PUSH		68	4-369-318-00	SPRING, TENSION	
55	4-389-375-01	BUTTON, POWER		69 Δ	1-426-383-11	COIL, DEMAGNETIZATION	
56	4-367-209-00	SPRING, COMPRESSION		70	*4-386-622-01	BAND, DGC	
57	4-386-645-01	CUSHION, PICTURE TUBE		71	4-308-870-00	CLIP, LEAD WIRE	
58	*4-387-805-03	BRACKET (A), PICTURE TUBE		72	1-452-032-00	MAGNET, DISK; 10MM φ	
59	*4-387-806-03	BRACKET (B), PICTURE TUBE		73	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ	
60 Δ	.8-738-753-05	PICTURE TUBE (A51JXH60X)		74	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
61	4-382-733-01	SCREW (S), PT		75	3-701-007-00	BAND, BINDING	
62	1-452-277-00	MAGNET, BMC					

ELECTRICAL PARTS LIST

B

NOTE:

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS

• MF : μ F, PF : μ F

COILS

• MMH : mH, UH : μ H

Note) In this parts list, the mounting diagram is for a different product.
Therefore, an excess of parts is listed.

RESISTORS

• All resistors are in ohms
• F : nonflammable

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1135-612-A	B BOARD, COMPLETE *****				<DIODE>	
		<CAPACITOR>		D301	8-719-911-19	DIODE 1SS119	
C301	1-106-220-00	MYLAR 0.1MF 10%	100V	D303	8-719-911-19	DIODE 1SS119	
C302	1-121-120-11	ELECT 220MF 20%	16V	D304	8-719-911-19	DIODE 1SS119	
C303	1-101-005-00	CERAMIC 0.022MF	50V	D305	8-719-911-19	DIODE 1SS119	
C304	1-106-367-00	MYLAR 0.01MF 10%	400V	D306	8-719-911-19	DIODE 1SS119	
C306	1-101-006-00	CERAMIC 0.047MF	50V	D307	8-719-911-19	DIODE 1SS119	
C307	1-101-004-00	CERAMIC 0.01MF	50V	D308	8-719-911-19	DIODE 1SS119	
C319	1-106-375-12	MYLAR 0.022MF 10%	250V	D310	8-719-911-19	DIODE 1SS119	
C321	1-130-785-11	MYLAR 0.47MF 10%	100V	D311	8-719-911-19	DIODE 1SS119	
C322	1-106-383-00	MYLAR 0.047MF 10%	100V	D312	8-719-911-19	DIODE 1SS119	
C323	1-124-499-11	ELECT 1MF 20%	50V	D313	8-719-911-19	DIODE 1SS119	
C324	1-102-074-00	CERAMIC 0.001MF 10%	50V	D314	8-719-911-19	DIODE 1SS119	
C325	1-101-004-00	CERAMIC 0.01MF	50V	D315	8-719-911-19	DIODE 1SS119	
C328	1-124-120-11	ELECT 220MF 20%	16V	D316	8-719-911-19	DIODE 1SS119	
C329	1-131-367-00	TANTALUM 22MF 10%	16V	D317	8-719-911-19	DIODE 1SS119	
C330	1-102-973-00	CERAMIC 100PF 5%	50V	D318	8-719-911-19	DIODE 1SS119	
C331	1-124-927-11	ELECT 4.7MF 20%	50V	D319	8-719-911-19	DIODE 1SS119	
C332	1-130-783-00	MYLAR 0.33MF 10%	100V			<DELAY LINE>	
C333	1-124-499-11	ELECT 1MF 20%	50V	DL301	1-415-122-00	DELAY LINE	
C334	1-106-375-12	MYLAR 0.022MF 10%	250V			<IC>	
C335	1-106-375-12	MYLAR 0.022MF 10%	250V	IC301	8-759-978-61	IC TDA4510/V6	
C336	1-124-927-11	ELECT 4.7MF 20%	50V	IC302	8-759-947-19	IC TDA3505-V9	
C337	1-130-834-00	MYLAR 1MF 10%	63V			<COIL>	
C339	1-106-375-12	MYLAR 0.022MF 10%	250V	L301	1-408-423-00	INDUCTOR 150UH	
C340	1-130-783-00	MYLAR 0.33MF 10%	100V	L302	1-408-408-00	INDUCTOR 8.2UH	
C341	1-130-783-00	MYLAR 0.33MF 10%	100V	L303	1-404-539-11	COIL	
C342	1-124-120-11	ELECT 220MF 20%	16V	L307	1-408-423-00	INDUCTOR 150UH	
C343	1-106-375-12	MYLAR 0.022MF 10%	250V			<TRANSISTOR>	
C344	1-106-375-12	MYLAR 0.022MF 10%	250V	Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C345	1-106-375-12	MYLAR 0.022MF 10%	250V	Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C346	1-101-880-00	CERAMIC 47PF 5%	50V	Q305	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C347	1-106-375-12	MYLAR 0.022MF 10%	250V	Q307	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C348	1-106-375-12	MYLAR 0.022MF 10%	250V	Q308	8-729-900-80	TRANSISTOR DTC114ES	
C349	1-106-375-12	MYLAR 0.022MF 10%	250V	Q309	8-729-173-38	TRANSISTOR 2SA733-K	
C352	1-124-120-11	ELECT 220MF 20%	16V			<RESISTOR>	
C354	1-106-216-00	MYLAR 0.068MF 20%	100V	R301	1-249-418-11	CARBON 1.2K 5% 1/4W	
		<CONNECTOR>		R303	1-249-412-11	CARBON 390 5% 1/4W	
CNB31	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P		R304	1-249-408-11	CARBON 180 5% 1/4W	
CNB32	*1-565-393-11	CONNECTOR, BOARD TO BOARD		R307	1-249-431-11	CARBON 15K 5% 1/4W	
CNB33	*1-565-393-11	CONNECTOR, BOARD TO BOARD		R308	1-249-417-11	CARBON 1K 5% 1/4W	
		<TRIMMER>					
CT301	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)					

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

B **F** **C**

REF.NO.	PART NO.	DESCRIPTION	REMARK
R309	1-249-409-11	CARBON 220 5% 1/4W	
R312	1-249-405-11	CARBON 100 5% 1/4W	
R313	1-249-405-11	CARBON 100 5% 1/4W	
R314	1-249-405-11	CARBON 100 5% 1/4W	
R316	1-249-404-00	CARBON 82 5% 1/4W	
R317	1-249-429-11	CARBON 10K 5% 1/4W	
R318	1-247-848-11	CARBON 5.1K 5% 1/4W	
R319	1-249-419-11	CARBON 1.5K 5% 1/4W	
R320	1-249-437-11	CARBON 47K 5% 1/4W	
R324	1-249-421-11	CARBON 2.2K 5% 1/4W	
R325	1-249-419-11	CARBON 1.5K 5% 1/4W	
R326	1-249-417-11	CARBON 1K 5% 1/4W	
R327	1-249-415-11	CARBON 680 5% 1/4W	
R329	1-247-891-00	CARBON 330K 5% 1/4W	
R330	1-249-440-11	CARBON 82K 5% 1/4W	
R331	1-247-895-00	CARBON 470K 5% 1/4W	
R332	1-247-903-00	CARBON 1M 5% 1/4W	
R333	1-214-907-00	METAL 56K 1% W	
R334	1-249-426-11	CARBON 5.6K 5% 1/4W	
R335	1-249-439-11	CARBON 68K 5% 1/4W	
R336	1-249-425-11	CARBON 4.7K 5% 1/4W	
R337	1-249-413-11	CARBON 470 5% 1/4W	
R338	1-249-413-11	CARBON 470 5% 1/4W	
R341	1-249-431-11	CARBON 15K 5% 1/4W	
R343	1-247-885-00	CARBON 180K 5% 1/4W	
R344	1-249-432-11	CARBON 18K 5% 1/4W	
R345	1-249-433-11	CARBON 22K 5% 1/4W	
R346	1-249-413-11	CARBON 470 5% 1/4W	
R347	1-249-417-11	CARBON 1K 5% 1/4W	
R352	1-249-437-11	CARBON 47K 5% 1/4W	
R353	1-249-413-11	CARBON 470 5% 1/4W	
R354	1-249-437-11	CARBON 47K 5% 1/4W	
R355	1-247-887-00	CARBON 220K 5% 1/4W	
R357	1-249-417-11	CARBON 1K 5% 1/4W	
R359	1-249-417-11	CARBON 1K 5% 1/4W	
R360	1-249-429-11	CARBON 10K 5% 1/4W	

<VARIABLE RESISTOR>

RV301	1-238-009-11	RES. ADJ. CARBON 220
RV302	1-238-016-11	RES. ADJ. CARBON 10K

<CRYSTAL>

X301	1-567-131-00	OSCILLATOR, CRYSTAL
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<YC MODULE>

YCM301	1-235-753-21	YC MODULE
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*1-631-128-11 F BOARD

<CONNECTOR>

CNF61	*1-566-664-11	PIN, CONNECTOR 4P
CNF62	*1-566-664-11	PIN, CONNECTOR 4P

<FUSE>

F601	Δ 1-576-016-11	FUSE, GLASS-TUBE (TIME-LAG) 3.15A/250V
	1-533-087-00	HOLDER, FUSE: F601

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<SWITCH>	
S601	Δ 1-571-433-11	SWITCH, PUSH (AC POWER)	

	*A-1330-992-A	C BOARD, COMPLETE	

	*4-379-160-01	COVER (REAR LID), CV	
	*4-379-167-01	COVER (MAIN), CV	
	*4-386-664-01	SPRING	
		<CAPACITOR>	
C703	1-102-820-00	CERAMIC 330PF 5% 50V	
C704	1-102-116-00	CERAMIC 680PF 10% 50V	
C705	1-102-980-00	CERAMIC 270PF 5% 50V	
C706	1-102-116-00	CERAMIC 680PF 10% 50V	
C707	1-162-116-00	CERAMIC 680PF 10% 2KV	
C708	1-162-114-00	CERAMIC 0.0047MF 2KV	
C709	1-102-116-00	CERAMIC 680PF 10% 50V	
C710	1-123-947-00	ELECT 10MF 20% 250V	
C712	1-102-820-00	CERAMIC 330PF 5% 50V	
C714	1-124-360-00	ELECT 1000MF 20% 16V	
C716	1-162-622-11	CERAMIC 330PF 10% 400V	
C717	1-102-114-00	CERAMIC 470PF 10% 50V	
C718	1-102-114-00	CERAMIC 470PF 10% 50V	
C719	1-102-114-00	CERAMIC 470PF 10% 50V	
		<CONNECTOR>	
CNC71	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CNC72	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P	
CNC81	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
CNC82	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
		<DIODE>	
D702	8-719-911-19	DIODE 1SS119	
D703	8-719-911-19	DIODE 1SS119	
D704	8-719-911-19	DIODE 1SS119	
D705	8-719-911-19	DIODE 1SS119	
D706	8-719-911-19	DIODE 1SS119	
D707	8-719-911-19	DIODE 1SS119	
D708	8-719-911-19	DIODE 1SS119	
D709	8-719-911-19	DIODE 1SS119	
D710	8-719-911-19	DIODE 1SS119	
D711	8-719-300-33	DIODE RU-3AM	
		<JACK>	
J701	1-526-798-51	SOCKET, PICTURE TUBE	
		<COIL>	
L704	1-410-878-21	INDUCTOR 33UH	
		<TRANSISTOR>	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-326-11	TRANSISTOR 2SC2611	
Q704	8-729-200-17	TRANSISTOR 2SA1091	
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q706	8-729-326-11	TRANSISTOR 2SC2611	

C

D1

D

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q707	8-729-200-17	TRANSISTOR 2SA1091				<DIODE>	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q709	8-729-326-11	TRANSISTOR 2SC2611					
Q710	8-729-200-17	TRANSISTOR 2SA1091		D870	8-719-911-19	DIODE 1SS119	
		<RESISTOR>				<IC>	
R704	1-216-487-11	METAL OXIDE 12K 5% 3W	F	IC870	8-759-945-58	IC RC4558P	
R705	1-202-824-00	SOLID 3.3K 10% 1/2W				<COIL>	
R706	1-249-409-11	CARBON 220 5% 1/4W		L870	1-459-105-21	COIL(WITH CORE)	
R707	1-247-822-11	CARBON 430 5% 1/4W				<TRANSISTOR>	
R708	1-249-401-11	CARBON 47 5% 1/4W		Q870	8-729-920-92	TRANSISTOR 2SD2096-EF	
R709	1-202-844-00	SOLID 330K 10% 1/2W			*4-368-683-01	SPRING; Q870	
R712	1-249-417-11	CARBON 1K 5% 1/4W				<RESISTOR>	
R713	1-215-469-00	METAL 100K 1% 1/6W		R870	1-249-417-11	CARBON 1K 5% 1/4W	
R714	1-216-487-11	METAL OXIDE 12K 5% 3W	F	R871	1-249-438-11	CARBON 56K 5% 1/4W	
R715	1-202-824-00	SOLID 3.3K 10% 1/2W		R872	1-249-410-11	CARBON 270 5% 1/4W	
R716	1-249-409-11	CARBON 220 5% 1/4W		R874	1-249-425-11	CARBON 4.7K 5% 1/4W	
R717	1-249-415-11	CARBON 680 5% 1/4W		R875	1-249-427-11	CARBON 6.8K 5% 1/4W	
R718	1-202-814-11	SOLID 33K 10% 1/2W		R876	1-249-436-11	CARBON 39K 5% 1/4W	
R719	1-249-401-11	CARBON 47 5% 1/4W		R877	1-249-428-11	CARBON 8.2K 5% 1/4W	
R720	1-249-423-11	CARBON 3.3K 5% 1/4W		R878	1-249-430-11	CARBON 12K 5% 1/4W	
R721	1-202-842-11	SOLID 220K 10% 1/2W		R879	1-247-891-00	CARBON 330K 5% 1/4W	
R722	1-202-848-00	SOLID 680K 10% 1/2W				<VARIABLE RESISTOR>	
R723	1-249-417-11	CARBON 1K 5% 1/4W		RV870	1-230-236-11	RES, ADJ, CERAMIC CARBON 47K	
R724	1-202-846-00	SOLID 470K 10% 1/2W		RV871	1-230-236-11	RES, ADJ, CERAMIC CARBON 47K	
R725	1-202-838-00	SOLID 100K 10% 1/2W				*****	
R726	1-202-824-00	SOLID 3.3K 10% 1/2W				*A-1345-889-A	D BOARD, COMPLETE (KV-M2121U ONLY)
R727	1-249-409-11	CARBON 220 5% 1/4W				*****	
R728	1-216-347-11	METAL OXIDE 0.68 5% 1W	F			*A-1345-890-A	D BOARD, COMPLETE (KV-M2120U ONLY)
R729	1-249-416-11	CARBON 820 5% 1/4W				*****	
R730	1-249-401-11	CARBON 47 5% 1/4W				*4-341-751-01	EYELET
R731	1-249-423-11	CARBON 3.3K 5% 1/4W				*4-341-752-01	EYELET
R732	1-249-415-11	CARBON 680 5% 1/4W				<CAPACITOR>	
R733	1-249-415-11	CARBON 680 5% 1/4W		C001	1-126-233-11	ELECT 22MF 20% 50V	
R734	1-249-405-11	CARBON 100 5% 1/4W		C002	1-124-499-11	ELECT 1MF 20% 50V	
R735	1-215-493-00	METAL 1M 1% 1/6W		C003	1-124-499-11	ELECT 1MF 20% 50V	
R736	1-216-487-11	METAL OXIDE 12K 5% 3W	F	C004	1-102-973-00	CERAMIC 100PF 5% 50V	
R737	1-215-483-00	METAL 390K 1% 1/6W		C005	1-106-220-00	MYLAR 0.1MF 10% 100V	
R739	1-249-417-11	CARBON 1K 5% 1/4W		C007	1-124-927-11	ELECT 4.7MF 20% 50V	
		<VARIABLE RESISTOR>		C009	1-102-111-00	CERAMIC 270PF 10% 50V	
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M		C010	1-102-965-00	CERAMIC 39PF 5% 50V	
RV702	1-230-619-11	RES, ADJ, METAL GLAZE 110M		C011	1-102-965-00	CERAMIC 39PF 5% 50V	
RV703	1-237-749-11	RES, ADJ, CARBON 2200		C012	1-101-004-00	CERAMIC 0.01MF 50V	
RV704	1-237-749-11	RES, ADJ, CARBON 2200		C013	1-102-959-00	CERAMIC 22PF 5% 50V	
		*****		C014	1-101-004-00	CERAMIC 0.01MF 50V	
		*1-631-127-11	DJ BOARD	C015	1-124-479-11	ELECT 330MF 20% 25V	
		*****		C016	1-102-978-00	CERAMIC 220PF 5% 50V	
		<CAPACITOR>		C019	1-126-233-11	ELECT 22MF 20% 50V	
C871	1-126-101-11	ELECT 100MF 20% 16V		C020	1-126-233-11	ELECT 22MF 20% 50V	
C873	1-123-932-00	ELECT 4.7MF 20% 160V		C022	1-101-004-00	CERAMIC 0.01MF 50V	
C874	1-126-233-11	ELECT 22MF 20% 50V		C033	1-101-004-00	CERAMIC 0.01MF 50V	
C875	1-102-074-00	CERAMIC 0.001MF 10% 50V		C034	1-126-101-11	ELECT 100MF 20% 16V	
C877	1-126-101-11	ELECT 100MF 20% 16V					
		<CONNECTOR>					
CND184	*1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P					
CND185	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)					

D

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C037	1-101-004-00	CERAMIC	0.01MF	50V	C563	1-124-477-11	ELECT 47MF 20% 16V
C041	1-102-116-00	CERAMIC	680PF	10% 50V	C564	1-136-298-00	FILM 0.0033MF 2% 100V
C043	1-102-978-00	CERAMIC	220PF	5% 50V	C565	1-106-228-00	MYLAR 0.22MF 10% 100V
C071	1-106-220-00	MYLAR	0.1MF	10% 100V	C566	1-102-951-00	CERAMIC 15PF 5% 50V
C072	1-106-383-00	MYLAR	0.047MF	10% 100V	C567	1-106-371-00	MYLAR 0.015MF 10% 400V
C073	1-101-004-00	CERAMIC	0.01MF	50V	C568	1-164-143-11	CERAMIC 0.001MF 10% 1KV
C075	1-102-074-00	CERAMIC	0.001MF	10% 50V	C570	1-124-902-00	ELECT 0.47MF 20% 50V
C076	1-102-125-00	CERAMIC	0.0047MF	10% 50V	C571	1-126-101-11	ELECT 100MF 20% 16V
C151	1-124-477-11	ELECT	47MF	20% 16V	C601	1-162-599-12	CERAMIC 0.0047MF 250V
C152	1-124-480-11	ELECT	470MF	20% 25V	C602	1-162-599-12	CERAMIC 0.0047MF 250V
C154	1-106-216-00	MYLAR	0.068MF	10% 100V	C603 Δ	1-161-964-61	CERAMIC 0.0047MF 250V
C155	1-106-216-00	MYLAR	0.068MF	10% 100V	C604	1-125-293-00	ELECT (BLOCK) 220MF 400V
C156	1-101-004-00	CERAMIC	0.01MF	50V	C605	1-161-754-00	CERAMIC 0.001MF 10% 2KV
C157	1-102-963-00	CERAMIC	33PF	5% 50V	C606	1-136-637-11	FILM 0.047MF 10% 630V
C158	1-124-477-11	ELECT	47MF	20% 16V	C607	1-106-383-00	MYLAR 0.047MF 10% 100V
C163	1-101-003-00	CERAMIC	0.0047MF	50V	C608	1-162-116-00	CERAMIC 680PF 10% 2KV
C164	1-101-003-00	CERAMIC	0.0047MF	50V	C609	1-124-347-00	ELECT 100MF 20% 160V
C201	1-124-479-11	ELECT	330MF	20% 25V	C610	1-124-557-11	ELECT 1000MF 20% 25V
C202	1-106-220-00	MYLAR	0.1MF	10% 100V	C614	1-126-101-11	ELECT 100MF 20% 16V
C203	1-124-791-11	ELECT	1MF	20% 50V	C615 Δ	1-162-578-51	CERAMIC 0.0047MF 20% 400V
C204	1-106-383-00	MYLAR	0.047MF	10% 100V	C616 Δ	1-162-578-51	CERAMIC 0.0047MF 20% 400V
C205	1-123-875-11	ELECT	10MF	20% 50V	C618	1-126-233-11	ELECT 22MF 20% 50V
C206	1-106-379-12	MYLAR	0.033MF	10% 250V	C621 Δ	1-136-516-11	FILM 0.1MF 20% 300V
C207	1-106-220-00	MYLAR	0.1MF	10% 100V	C626 Δ	1-102-316-91	CERAMIC 15PF 5% 500V
C208	1-126-104-11	ELECT	470MF	20% 25V	C629 Δ	1-102-316-91	CERAMIC 15PF 5% 500V
C209	1-102-074-00	CERAMIC	0.001MF	10% 50V	C631	1-102-244-00	CERAMIC 220PF 10% 500V
C210	1-102-114-00	CERAMIC	470PF	10% 50V	C801	1-124-499-11	ELECT 1MF 20% 50V
C212	1-102-973-00	CERAMIC	100PF	5% 50V	C803	1-106-359-00	MYLAR 0.0047MF 10% 400V
C213	1-101-005-00	CERAMIC	0.022MF	50V	C804	1-102-244-00	CERAMIC 220PF 10% 500V
C402	1-101-003-00	CERAMIC	0.0047MF	50V	C806 Δ	1-162-131-11	CERAMIC 220PF 10% 2KV
C404	1-102-114-00	CERAMIC	470PF	10% 50V	C807	1-136-933-11	FILM 1MF 5% 100V
C405	1-124-902-00	ELECT	0.47MF	20% 50V	C808	1-136-187-11	FILM 0.047MF 10% 250V
C406	1-124-477-11	ELECT	47MF	20% 16V	C812 Δ	1-136-080-11	FILM 0.011MF 3% 2KV
C407	1-124-902-00	ELECT	0.47MF	20% 50V	C815	1-124-634-11	ELECT 1MF 20% 250V
C409	1-124-477-11	ELECT	47MF	20% 16V	C819	1-102-114-00	CERAMIC 470PF 10% 50V
C410	1-124-477-11	ELECT	47MF	20% 16V	C821	1-106-220-00	MYLAR 0.1MF 10% 100V
C411	1-102-074-00	CERAMIC	0.001MF	10% 50V	C822	1-136-540-11	FILM 0.82MF 5% 160V
C412	1-126-101-11	ELECT	100MF	20% 16V	C825	1-102-212-00	CERAMIC 820PF 10% 500V
C413	1-126-233-11	ELECT	22MF	20% 50V	C851	1-123-948-00	ELECT 22MF 20% 250V
C415	1-126-233-11	ELECT	22MF	20% 50V	C852	1-162-114-00	CERAMIC 0.0047MF 2KV
C417	1-101-005-00	CERAMIC	0.022MF	50V	C853	1-162-318-11	CERAMIC 0.001MF 10% 500V
C418	1-102-074-00	CERAMIC	0.001MF	10% 50V	C856	1-162-318-11	CERAMIC 0.001MF 10% 500V
C433	1-102-125-00	CERAMIC	0.0047MF	10% 50V	C857	1-106-375-12	MYLAR 0.022MF 10% 250V
C501	1-101-004-00	CERAMIC	0.01MF	50V	C858	1-126-233-11	ELECT 22MF 20% 50V
C502	1-102-117-00	CERAMIC	820PF	10% 50V	C859	1-126-101-11	ELECT 100MF 20% 16V
C503	1-101-880-00	CERAMIC	47PF	5% 50V	C860	1-102-228-00	CERAMIC 470PF 10% 500V
C504	1-124-480-11	ELECT	470MF	20% 25V	<FILTER>		
C505	1-124-122-11	ELECT	100MF	20% 50V	CF001	1-577-082-11	VIBRATOR, CERAMIC
C506	1-130-902-00	MYLAR	0.68MF	10% 63V	<CONNECTOR>		
C507	1-124-913-11	ELECT	470MF	20% 50V	CND21	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)
C508	1-106-220-00	MYLAR	0.1MF	10% 100V	CND42	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
C510	1-126-233-11	ELECT	22MF	20% 50V	CND43	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
C551	1-124-927-11	ELECT	4.7MF	20% 50V	CND44	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
C552	1-124-927-11	ELECT	4.7MF	20% 50V	(KV-M2121U ONLY)		
C553	1-106-220-00	MYLAR	0.1MF	10% 100V	CND45	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
C554	1-126-233-11	ELECT	22MF	20% 50V	(KV-M2121U ONLY)		
C555	1-124-925-11	ELECT	2.2MF	20% 50V	CND61	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
C556	1-101-361-00	CERAMIC	150PF	5% 50V	CND62	*1-565-458-11	PIN, CONNECTOR 3P
C557	1-130-783-00	MYLAR	0.33MF	10% 100V	CND81	*1-564-038-00	CONNECTOR PLUG, DY (MINI) 6P
C558	1-130-783-00	MYLAR	0.33MF	10% 100V			
C559	1-106-357-00	MYLAR	0.0039MF	10% 400V			
C560	1-126-101-11	ELECT	100MF	20% 16V			
C561	1-106-220-00	MYLAR	0.1MF	10% 100V			
C562	1-164-143-11	CERAMIC	0.001MF	10% 1KV			

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
CND82	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P		IC001	8-759-630-92	IC M50436-616SP	
CND83	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		IC002	8-752-330-60	IC CXK1012P	
CND84	*1-560-121-00	PLUG, CONNECTOR (2.5MM) 4P		IC003	8-749-920-65	IC KEY-C00SV	
CND85	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)		IC004	8-759-157-40	IC UPC574J	
				IC005	8-759-982-21	IC RC78L05A	
<DIODE>				IC201	8-759-980-45	IC TDA1013A-N4	
D002	8-719-911-19	DIODE 1SS119		IC401	8-759-240-53	IC TC4053BP	
D003	8-719-911-19	DIODE 1SS119		IC402	8-759-946-32	IC TEA2014A	
D004	8-719-911-19	DIODE 1SS119		IC501	8-759-113-05	IC UPC1488H	
D005	8-719-970-79	DIODE PLED-H544CL-6			*4-368-683-01	SPRING; IC501	
	*4-389-319-01	HOLDER, LED; D005		IC551	8-759-973-52	IC TDA2579A/N7	
D007	8-719-911-19	DIODE 1SS119		IC601	8-749-901-65	IC STR54041	
D008	8-719-911-19	DIODE 1SS119			4-365-216-00	SPACER, MICA; IC601	
D009	8-719-911-19	DIODE 1SS119			*4-368-683-01	SPRING; IC601	
D010	8-719-911-19	DIODE 1SS119		IC851	8-759-604-39	IC M5F78M12	
D011	8-719-911-19	DIODE 1SS119			*4-368-683-01	SPRING; IC851	
D016	8-719-911-19	DIODE 1SS119		<JACK>			
D017	8-719-911-19	DIODE 1SS119		J201	1-507-678-00	JACK	
D019	8-719-911-19	DIODE 1SS119		J401	1-561-534-00	SOCKET 21P	
D025	8-719-109-71	DIODE RD3.9ES-B1		J402	1-563-500-11	JACK BLOCK, PIN (L TYPE) 2P	
D151	8-719-911-19	DIODE 1SS119		<COIL>			
D156	8-719-911-19	DIODE 1SS119		L002	1-408-411-00	INDUCTOR 15UH	
D201	8-719-911-19	DIODE 1SS119		L003	1-408-409-00	INDUCTOR 10UH	
D202	8-719-911-19	DIODE 1SS119		L004	1-408-415-00	INDUCTOR 33UH	
D402	8-719-109-96	DIODE RD6.8ES-B1		L005	1-410-663-31	INDUCTOR 10UH	
D403	8-719-109-96	DIODE RD6.8ES-B1		L151	1-408-226-00	INDUCTOR 82UH	
D404	8-719-109-96	DIODE RD6.8ES-B1		L152	1-410-683-31	INDUCTOR 560UH	
D405	8-719-911-19	DIODE 1SS119		L201	1-408-409-00	INDUCTOR 10UH	
D406	8-719-911-19	DIODE 1SS119		L202	1-408-409-00	INDUCTOR 10UH	
D407	8-719-911-19	DIODE 1SS119		L401	1-408-417-00	INDUCTOR 47UH	
D408	8-719-911-19	DIODE 1SS119		L403	1-408-409-00	INDUCTOR 10UH	
D410	8-719-911-19	DIODE 1SS119		L410	1-410-316-11	INDUCTOR 1UH	
D411	8-719-911-19	DIODE 1SS119		L501	1-408-226-00	INDUCTOR 82UH	
D413	8-719-110-30	DIODE RD12ES-B1		L803	1-407-365-00	COIL, CHOKE	
D414	8-719-911-19	DIODE 1SS119		L805	1-459-652-12	HLC	
D415	8-719-911-19	DIODE 1SS119		L806	1-459-390-00	COIL (WITH CORE)	
D416	8-719-911-19	DIODE 1SS119		L821	1-459-104-00	COIL, DUST CORE	
D419	8-719-911-19	DIODE 1SS119		L822	1-410-067-21	INDUCTOR 4.7MMH	
D420	8-719-911-19	DIODE 1SS119		L823	1-459-855-11	COIL, FERRITE	
D421	8-719-911-19	DIODE 1SS119		<IC LINK>			
D501	8-719-911-55	DIODE U05G		PS501A	1-532-685-91	LINK, IC 0.8A	
D551	8-719-911-55	DIODE U05G		PS802A	1-532-637-91	LINK, IC 1.0A	
D601	8-719-946-90	DIODE KB04JL-6088		<TRANSISTOR>			
D602	8-719-300-65	DIODE ES1F		Q001	8-729-900-36	TRANSISTOR DTC124ES	
D603	8-719-911-55	DIODE U05G		Q003	8-729-900-63	TRANSISTOR DTA124ES	
D604	8-719-928-08	DIODE ERD28-08S		Q004	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D605	8-719-950-57	DIODE BYD33G		Q005	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D606	8-719-908-06	DIODE ERA81-005		Q008	8-729-900-36	TRANSISTOR DTC124ES	
D607	8-719-950-57	DIODE BYD33G		Q009	8-729-900-74	TRANSISTOR DTC143TS	
D608	8-719-950-57	DIODE BYD33G		Q012	8-729-173-38	TRANSISTOR 2SA733-K	
D609	8-719-911-55	DIODE U05G		Q015	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D610	8-719-911-55	DIODE U05G		Q071	8-729-173-38	TRANSISTOR 2SA733-K	
D611	8-719-312-40	DIODE R2K		Q151	8-729-900-61	TRANSISTOR DTA114ES	
D801	8-719-945-80	DIODE ERC06-15S		Q152	8-729-900-61	TRANSISTOR DTA114ES	
D802	8-719-928-08	DIODE ERD28-08S		Q154	8-729-900-61	TRANSISTOR DTA114ES	
D851	8-719-950-57	DIODE BYD33G					
D852	8-719-300-65	DIODE ES1F					
D853	8-719-950-57	DIODE BYD33G					
D855	8-719-950-57	DIODE BYD33G					
D857	8-719-911-55	DIODE U05G					
D858	8-719-911-55	DIODE U05G					
<IC>							

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q155	8-729-119-78	TRANSISTOR 2SC2785-HFE		R071	1-249-413-11	CARBON 470 5%	1/4W
Q158	8-729-901-59	TRANSISTOR BF199		R072	1-249-441-11	CARBON 100K 5%	1/4W
Q402	8-729-119-78	TRANSISTOR 2SC2785-HFE		R073	1-249-435-11	CARBON 33K 5%	1/4W
Q403	8-729-173-38	TRANSISTOR 2SA733-K		R074	1-249-429-11	CARBON 10K 5%	1/4W
Q404	8-729-173-38	TRANSISTOR 2SA733-K					
Q405	8-729-173-38	TRANSISTOR 2SA733-K		R075	1-249-431-11	CARBON 15K 5%	1/4W
Q406	8-729-900-80	TRANSISTOR DTC114ES		R076	1-249-423-11	CARBON 3.3K 5%	1/4W
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE		R077	1-249-435-11	CARBON 33K 5%	1/4W
Q551	8-729-173-38	TRANSISTOR 2SA733-K		R078	1-249-427-11	CARBON 6.8K 5%	1/4W
Q552	8-729-900-36	TRANSISTOR DTC124ES		R079	1-249-429-11	CARBON 10K 5%	1/4W
Q601	8-729-906-74	TRANSISTOR BC637-16		R080	1-249-429-11	CARBON 10K 5%	1/4W
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK		R084	1-249-424-11	CARBON 3.9K 5%	1/4W
Q802	8-729-906-69	TRANSISTOR BU506DF		R085	1-247-881-00	CARBON 120K 5%	1/4W
*4-389-343-01		SPRING: Q802		R086	1-249-429-11	CARBON 10K 5%	1/4W
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE		R151	1-249-405-11	CARBON 100 5%	1/4W
<RESISTOR>				R152	1-249-429-11	CARBON 10K 5%	1/4W
R001	1-249-438-11	CARBON 56K 5%	1/4W	R153	1-249-433-11	CARBON 22K 5%	1/4W
R002	1-249-440-11	CARBON 82K 5%	1/4W	R154	1-249-429-11	CARBON 10K 5%	1/4W
R004	1-249-439-11	CARBON 68K 5%	1/4W	R155	1-249-418-11	CARBON 1.2K 5%	1/4W
R005	1-249-413-11	CARBON 470 5%	1/4W	R156	1-247-891-00	CARBON 330K 5%	1/4W
R006	1-249-441-11	CARBON 100K 5%	1/4W				
R008	1-249-429-11	CARBON 10K 5%	1/4W	R157	1-249-421-11	CARBON 2.2K 5%	1/4W
R009	1-249-429-11	CARBON 10K 5%	1/4W	R158	1-249-421-11	CARBON 2.2K 5%	1/4W
R010	1-249-433-11	CARBON 22K 5%	1/4W	R160	1-249-405-11	CARBON 100 5%	1/4W
R011	1-249-433-11	CARBON 22K 5%	1/4W	R162	1-249-425-11	CARBON 4.7K 5%	1/4W
R012	1-249-433-11	CARBON 22K 5%	1/4W	R163	1-249-425-11	CARBON 4.7K 5%	1/4W
R013	1-249-433-11	CARBON 22K 5%	1/4W	R164	1-249-413-11	CARBON 470 5%	1/4W
R014	1-215-900-11	METAL OXIDE 22K 5%	2W	R172	1-249-422-11	CARBON 2.7K 5%	1/4W
R015	1-249-421-11	CARBON 2.2K 5%	1/4W	R173	1-249-429-11	CARBON 10K 5%	1/4W
R016	1-249-433-11	CARBON 22K 5%	1/4W	R180	1-249-419-11	CARBON 1.5K 5%	1/4W
R017	1-249-407-11	CARBON 150 5%	1/4W	R185	1-249-439-11	CARBON 68K 5%	1/4W
R018	1-249-417-11	CARBON 1K 5%	1/4W	R186	1-249-441-11	CARBON 100K 5%	1/4W
R019	1-249-413-11	CARBON 470 5%	1/4W	R201	1-249-387-11	CARBON 3.3 5%	1/4W
R020	1-249-413-11	CARBON 470 5%	1/4W	R202	1-247-887-00	CARBON 220K 5%	1/4W
R021	1-249-413-11	CARBON 470 5%	1/4W	R203	1-249-411-11	CARBON 330 5%	1/4W
R022	1-249-411-11	CARBON 330 5%	1/4W	R204	1-247-739-11	CARBON 100 5%	1/2W
R023	1-249-416-11	CARBON 820 5%	1/4W	R401	1-247-804-11	CARBON 75 5%	1/4W
R025	1-249-417-11	CARBON 1K 5%	1/4W	R402	1-247-804-11	CARBON 75 5%	1/4W
R029	1-249-429-11	CARBON 10K 5%	1/4W	R403	1-247-804-11	CARBON 75 5%	1/4W
R030	1-249-429-11	CARBON 10K 5%	1/4W	R404	1-247-804-11	CARBON 75 5%	1/4W
R035	1-249-431-11	CARBON 15K 5%	1/4W	R405	1-249-411-11	CARBON 330 5%	1/4W
R037	1-249-429-11	CARBON 10K 5%	1/4W	R406	1-249-411-11	CARBON 330 5%	1/4W
R038	1-249-429-11	CARBON 10K 5%	1/4W	R407	1-249-411-11	CARBON 330 5%	1/4W
R039	1-249-417-11	CARBON 1K 5%	1/4W	R408	1-249-431-11	CARBON 15K 5%	1/4W
R040	1-249-430-11	CARBON 12K 5%	1/4W	R409	1-249-431-11	CARBON 15K 5%	1/4W
R042	1-249-433-11	CARBON 22K 5%	1/4W	R410	1-249-409-11	CARBON 220 5%	1/4W
R043	1-249-429-11	CARBON 10K 5%	1/4W	R411	1-249-409-11	CARBON 220 5%	1/4W
R044	1-249-433-11	CARBON 22K 5%	1/4W	R412	1-249-409-11	CARBON 220 5%	1/4W
R046	1-249-425-11	CARBON 4.7K 5%	1/4W	R413	1-249-425-11	CARBON 4.7K 5%	1/4W
R051	1-249-427-11	CARBON 6.8K 5%	1/4W	R414	1-249-433-11	CARBON 22K 5%	1/4W
R052	1-249-413-11	CARBON 470 5%	1/4W	R415	1-215-858-00	METAL OXIDE 15 5%	1W
R055	1-249-413-11	CARBON 470 5%	1/4W	(KV-M2121U ONLY)			
R056	1-249-423-11	CARBON 3.3K 5%	1/4W	R416	1-247-804-11	CARBON 75 5%	1/4W
R058	1-249-429-11	CARBON 10K 5%	1/4W	R418	1-249-417-11	CARBON 1K 5%	1/4W
R059	1-249-426-11	CARBON 5.6K 5%	1/4W	R419	1-249-425-11	CARBON 4.7K 5%	1/4W
R060	1-249-417-11	CARBON 1K 5%	1/4W	R420	1-249-413-11	CARBON 470 5%	1/4W
R061	1-249-413-11	CARBON 470 5%	1/4W	R421	1-249-409-11	CARBON 220 5%	1/4W
R063	1-249-422-11	CARBON 2.7K 5%	1/4W	R422	1-249-404-00	CARBON 82 5%	1/4W
R064	1-249-417-11	CARBON 1K 5%	1/4W	R423	1-249-438-11	CARBON 56K 5%	1/4W
R065	1-249-433-11	CARBON 22K 5%	1/4W	R424	1-249-437-11	CARBON 47K 5%	1/4W
R066	1-249-425-11	CARBON 4.7K 5%	1/4W	R425	1-249-437-11	CARBON 47K 5%	1/4W
R070	1-249-429-11	CARBON 10K 5%	1/4W	R426	1-249-405-11	CARBON 100 5%	1/4W
				R427	1-247-804-11	CARBON 75 5%	1/4W
				R428	1-249-432-11	CARBON 18K 5%	1/4W
				R429	1-249-409-11	CARBON 220 5%	1/4W
				R430	1-249-437-11	CARBON 47K 5%	1/4W

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.



REF. NO.	PART NO.	DESCRIPTION	REMARK
R431	1-249-441-11	CARBON	100K 5% 1/4W
R432	1-249-437-11	CARBON	47K 5% 1/4W
R434	1-249-415-11	CARBON	680 5% 1/4W
R435	1-249-440-11	CARBON	82K 5% 1/4W
R436	1-249-409-11	CARBON	220 5% 1/4W
R437	1-249-429-11	CARBON	10K 5% 1/4W
R441	1-216-375-00	METAL OXIDE	3.3 5% 2W F (KV-M2121U ONLY)
R444	1-249-411-11	CARBON	330 5% 1/4W
R445	1-216-452-11	METAL OXIDE	180 5% 2W F (KV-M2120U ONLY)
R501	1-249-425-11	CARBON	4.7K 5% 1/4W
R502	1-247-744-11	CARBON	270 5% 1/2W
R503	1-215-867-00	METAL OXIDE	470 5% 1W
R504	1-247-895-00	CARBON	470K 5% 1/4W
R505	1-249-429-11	CARBON	10K 5% 1/4W
R506	1-249-424-11	CARBON	3.9K 5% 1/4W
R507	1-249-435-11	CARBON	33K 5% 1/4W
R508	1-216-347-11	METAL OXIDE	0.68 5% 1W F
R509	1-247-903-00	CARBON	1M 5% 1/4W
R510	1-249-439-11	CARBON	68K 5% 1/4W
R511	1-247-893-11	CARBON	390K 5% 1/4W
R513	1-249-424-11	CARBON	3.9K 5% 1/4W
R551	1-212-883-00	FUSIBLE	120 5% 1/4W
R552	1-249-419-11	CARBON	1.5K 5% 1/4W
R553	1-249-426-11	CARBON	5.6K 5% 1/4W
R554	1-249-404-00	CARBON	82 5% 1/4W
R555	1-249-423-11	CARBON	3.3K 5% 1/4W
R556	1-249-418-11	CARBON	1.2K 5% 1/4W
R558	1-249-417-11	CARBON	1K 5% 1/4W
R559	1-249-433-11	METAL	22K 5% 1/4W
R560	1-247-888-11	METAL	240K 5% 1/4W
R561	1-249-412-11	CARBON	390 5% 1/4W
R562	1-249-428-11	METAL	8.2K 5% 1/4W
R563	1-249-409-11	CARBON	220 5% 1/4W
R564	1-249-410-11	CARBON	270 5% 1/4W
R565	1-215-454-00	METAL	24K 1% 1/6W
R567	1-247-887-00	CARBON	220K 5% 1/4W
R569	1-249-431-11	CARBON	15K 5% 1/4W
R571	1-249-436-11	CARBON	39K 5% 1/4W
R572	1-249-405-11	CARBON	100 5% 1/4W
R573	1-249-433-11	CARBON	22K 5% 1/4W
R574	1-249-439-11	CARBON	68K 5% 1/4W
R575	1-249-421-11	CARBON	2.2K 5% 1/4W
R576	1-249-432-11	CARBON	18K 5% 1/4W
R577	1-249-405-11	CARBON	100 5% 1/4W
R601 Δ	1-205-909-11	WIREWOUND	3.3 5% 10W F
R602	1-214-931-00	CARBON	560K 5% 1/2W
R603	1-215-903-11	METAL OXIDE	68K 5% 2W
R604	1-247-750-11	CARBON	680 5% 1/2W
R605 Δ	1-218-265-91	METAL GLAZE	8.2M 5% 1W
R606	1-212-877-11	FUSIBLE	68 5% 1/4W
R608	1-215-884-11	METAL OXIDE	47 5% 2W
R609	1-207-905-00	WIREWOUND	0.27 10% 2W
R612	1-217-809-91	FUSIBLE	0.33 5% 1/4W
R613	1-217-811-91	FUSIBLE	0.47 5% 1/4W
R615	1-249-399-11	CARBON	33 5% 1/4W
R617	1-216-376-00	METAL OXIDE	3.9 5% 2W F
R619	1-249-430-11	CARBON	12K 5% 1/4W
R801	1-217-811-91	FUSIBLE	0.47 5% 1/4W
R802	1-205-713-11	WIREWOUND	1K 10% 5W F
R804	1-217-820-91	FUSIBLE	3.3K 5% 1/4W
R805	1-249-399-11	CARBON	33 5% 1/4W
R806	1-249-421-11	CARBON	2.2K 5% 1/4W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R807	1-212-877-11	FUSIBLE	68 5% 1/4W
R808	1-216-346-00	METAL OXIDE	0.56 5% 1W F
R809	1-249-421-11	CARBON	2.2K 5% 1/4W
R810	1-202-725-00	SOLID	3.3M 10% 1/2W
R823	1-215-868-00	METAL OXIDE	680 5% 1W F
R833	1-212-956-00	FUSIBLE	8.2 5% 1/2W F
R852	1-216-431-11	METAL OXIDE	560 5% 1W
R854	1-217-811-91	FUSIBLE	0.47 5% 1/4W
R855	1-202-830-00	SOLID	10K 10% 1/2W
R856	1-217-825-11	FUSIBLE	8.2K 5% 1/4W
R857	1-247-883-00	CARBON	150K 5% 1/4W
<VARIABLE RESISTOR>			
RV401	1-238-163-11	RES. VAR. CARBON 10K	
RV501	1-238-016-11	RES. ADJ. CARBON 10K	
RV552	1-238-020-11	RES. ADJ. CARBON 100K	
RV553	1-238-016-11	RES. ADJ. CARBON 10K	
RV801	1-223-102-00	RES. ADJ. WIREWOUND 120	
<SWITCH>			
S001	1-571-532-21	SWITCH, TACTIL	
S002	1-571-532-21	SWITCH, TACTIL	
S003	1-571-532-21	SWITCH, TACTIL	
S004	1-571-532-21	SWITCH, TACTIL	
S005	1-571-532-21	SWITCH, TACTIL	
S006	1-571-532-21	SWITCH, TACTIL	
S007	1-571-532-21	SWITCH, TACTIL	
S008	1-571-532-21	SWITCH, TACTIL	
S009	1-571-532-21	SWITCH, TACTIL	
<SPARK GAP>			
SG801	1-519-422-11	GAP, SPARK	
<TRANSFORMER>			
T601 Δ	1-449-275-12	S.R.T	
T604 Δ	1-424-078-11	TRANSFORMER, TRIGGER PULSE	
T605 Δ	1-421-862-11	LFT	
T801	1-437-090-00	HDT	
T851 Δ	1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)	
<THERMISTOR>			
TH601 Δ	1-808-059-31	THERMISTOR, POSITIVE	
<TUNER>			
TU101 Δ	1-465-035-11	TUNER, ET (SUF-743)	
<IF BLOCK>			
VIF101	1-464-961-11	IF BLOCK (IFG-395)	

*A-1347-031-A V BOARD, COMPLETE (KV-M2121U ONLY)			

*4-380-698-01 CASE (MAIN), SHIELD, A1			
*4-380-699-01 CASE (UPPER LID), SHIELD, A1			
*4-382-701-01 CASE (BOTTOM LID), SHIELD, A2			

1-4. VIEWING TELETEXT

To view the teletext service, use the Remote Commander. RM-670 has teletext buttons indicated in green; teletext operation are indicated in green.

Operation

- 1 Select the TV channel for the desired teletext service.
- 2 Press (TEXT/MIX) to display the teletext service.
Once has been pressed, the TV channel cannot be changed.
- 3 Key in the three digits for the desired page using the number buttons. If an error is made, complete the three digit sequence by keying in any digit. Then re-enter the correct page number. The requested teletext page is displayed.

To return to the TV mode, press TV on the Remote Commander.

The teletext service can be displayed directly from the standby mode, by pressing .

To receive the teletext service of a different TV channel.

- 1 Press TV to return to the TV mode.
- 2 Select the desired TV channel.
- 3 Press .

To display the index page.

Press (INDEX). If the necessary signal is not being broadcast, page 100 is displayed.

To access the next or preceding page

Press (PAGE+) or (PAGE-).

These buttons are indicated in white on the Commander.

To superimpose the teletext display on the TV picture.

Press twice from TV mode.

Press again to return to the TEXT display.

To suppress the teletext display so that the TV picture is displayed.

Press (TEXT CL). This button can be operated from both the TEXT and MIX displays.

To prevent a teletext page (subpage) from being updated / changed.

Press HOLD. The HOLD symbol " " appears at the top left of the screen.

To resume normal teletext reception, press .

To enlarge the teletext display.

Press . Press once to enlarge the upper half of the display; press again to enlarge the lower half of the display; press again to return to the normal display.

To reveal concealed information such as the answers to a quiz

Press (REVEAL)

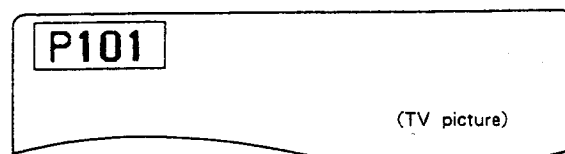
Press again to conceal the answers.

To adjust the contrast of the teletext display.

Press + or - button.

To watch the TV program while waiting for a requested page to be displayed.

- 1 Request the new page.
- 2 Press to watch the TV program. The requested page number appears at the top left of the screen.
When the requested page has been found, the page number is displayed on the top left hand corner of the screen.



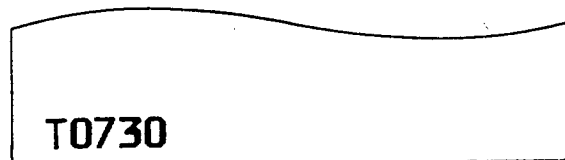
To view this page, press .

To have a requested page displayed at a pre-determined time.

- 1 Request a time coded page (e. g. alarm page).
- 2 Press (TP ON).
"T****" will appear at the bottom of the screen.



- 3 Enter your request time with the number buttons, using four digits. For example, 07:30.



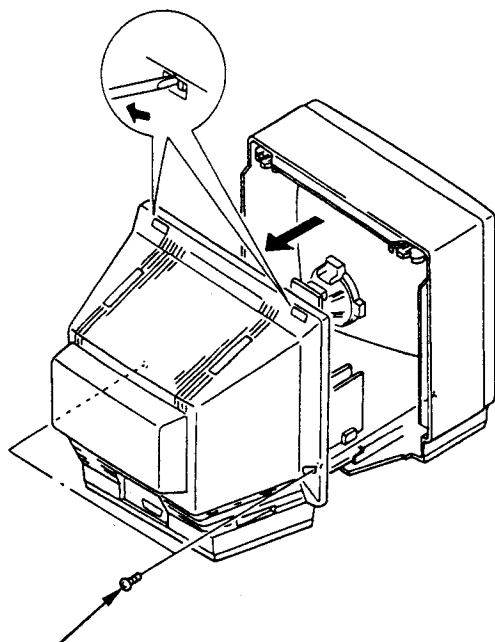
To watch the TV program until the requested time, press . At the requested time, the page number will be displayed at the top of the screen.

To view this page, press .

To cancel the request, first ensure that the teletext page is displayed, then press (TP OFF).

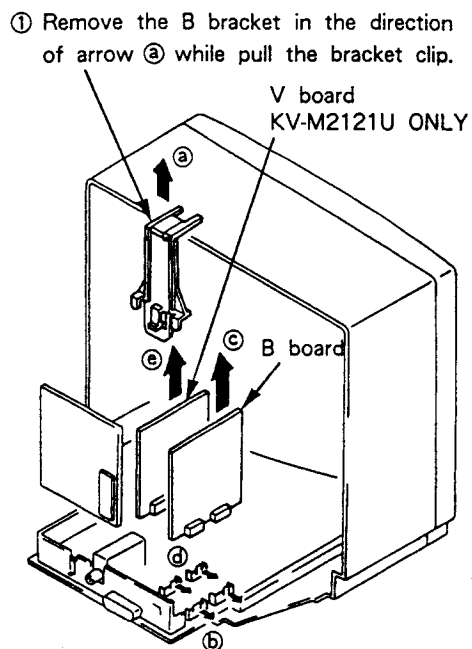
SECTION 2 DISASSEMBLY

2-1. REAR COVER REMOVAL



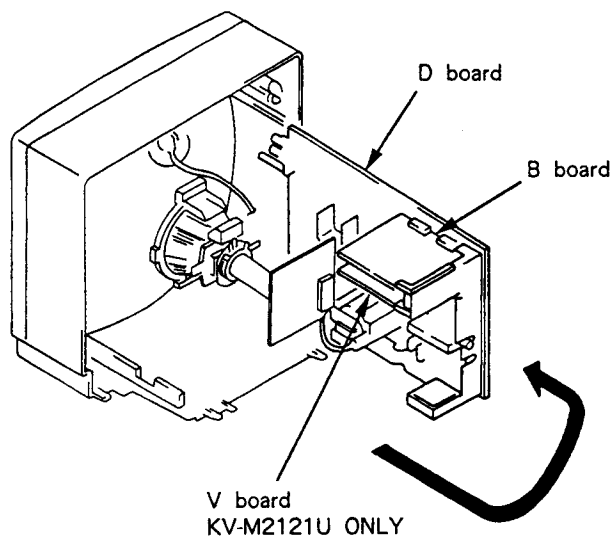
- ① Remove the two screws.
- ② On the top of the rear cover, use a screwdriver to push the tab (circled in the figure) in the direction of the arrow to release the cover holder.

2-2. B AND V BOARDS REMOVAL

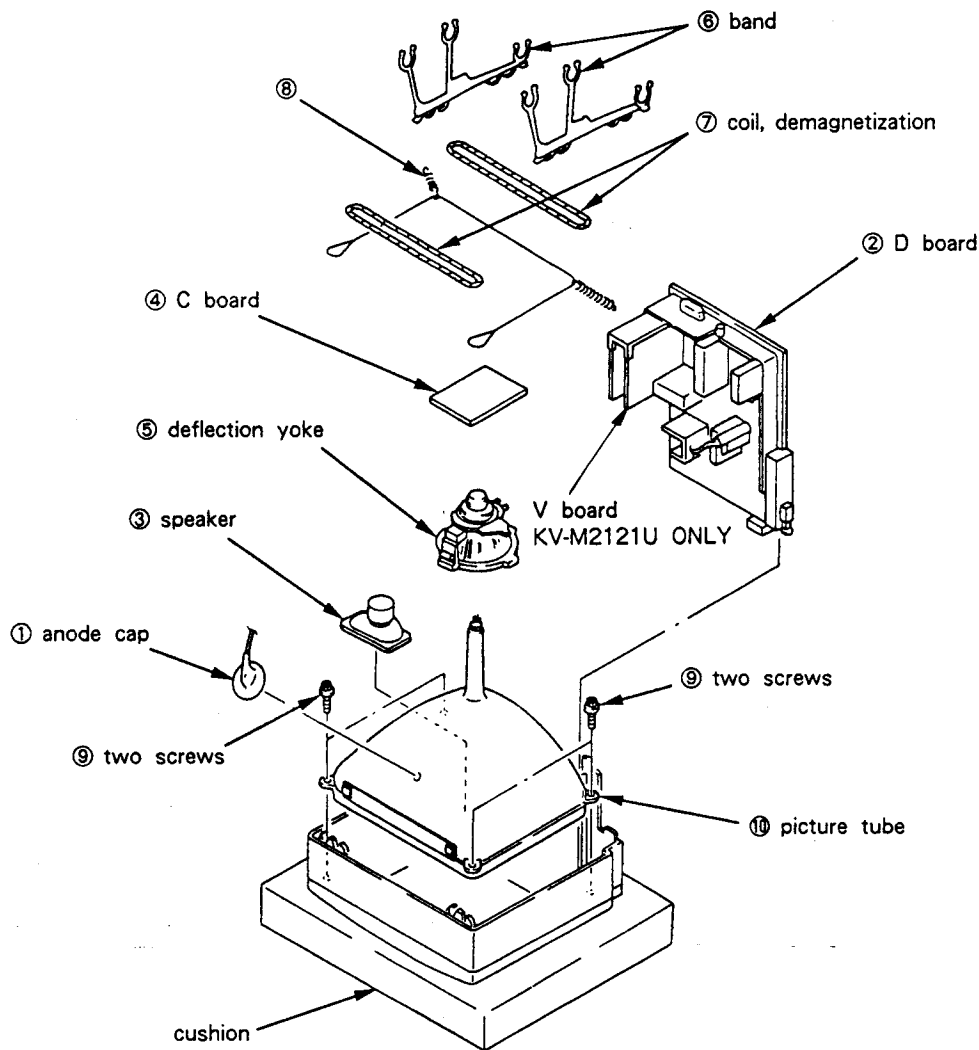


- ① Remove the B bracket in the direction of arrow a while pull the bracket clip.
- ② Pull the two clips in the direction of arrow b. Remove the B board in the direction of arrow c.
- ③ Pull the two clips in the direction of arrow d. Remove the V board in the direction of arrow e.

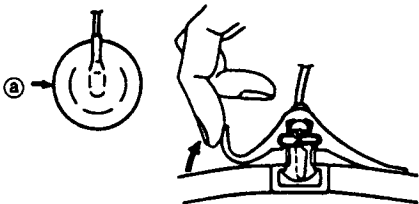
2-3. SERVICE POSITION



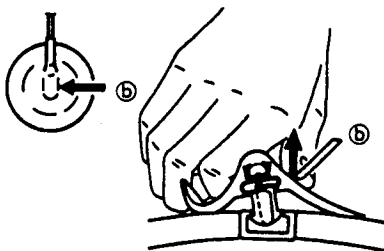
2-4. PICTURE TUBE REMOVAL



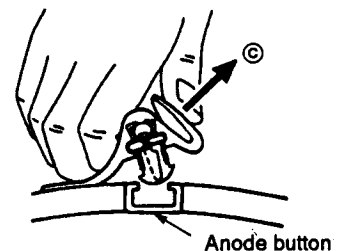
• REMOVAL OF ANODE-CAP
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ①.



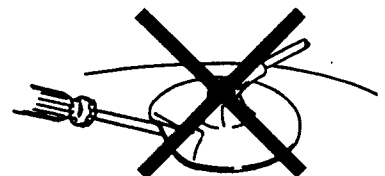
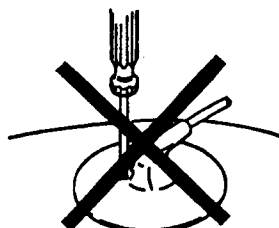
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The control and switch below should be set as follows unless otherwise noted :

- CONTRAST control 80% (or Normal by Commander)
 ☆ BRIGHTNESS control 50%

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Colour Bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

Preparation

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

3-1. BEAM LANDING

Demagnetize with a degausser.

1. Input a raster signal with the pattern generator.
 CONTRAST } normal
 BRIGHTNESS }
2. Turn the raster signal of the pattern generator to red.
3. Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides, evenly.
 (Fig. 3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes red. (Fig. 3-1)
5. Switch over the raster signal to blue and green and confirm the condition.
6. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.
7. When landing at the corners is not right, adjust by using the magnet. (Fig. 3-4)

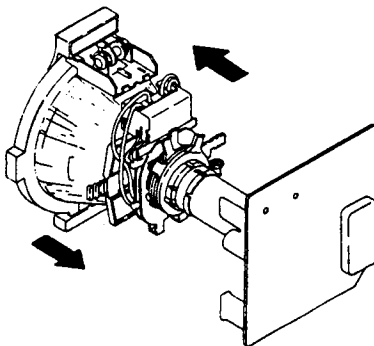


Fig. 3-1

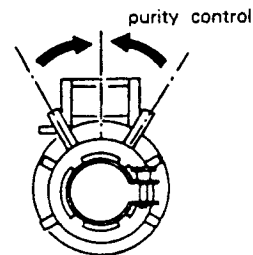


Fig. 3-2

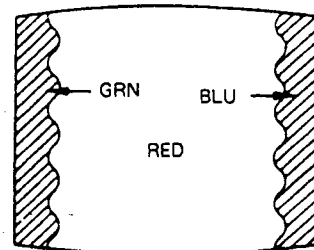


Fig. 3-3

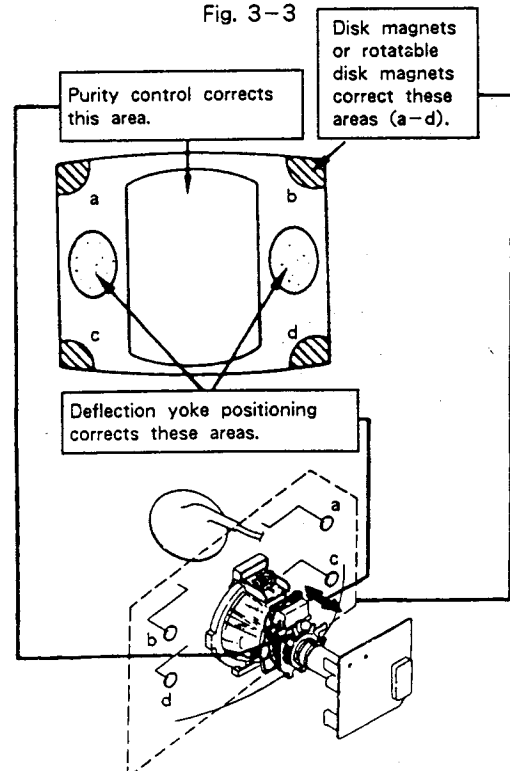


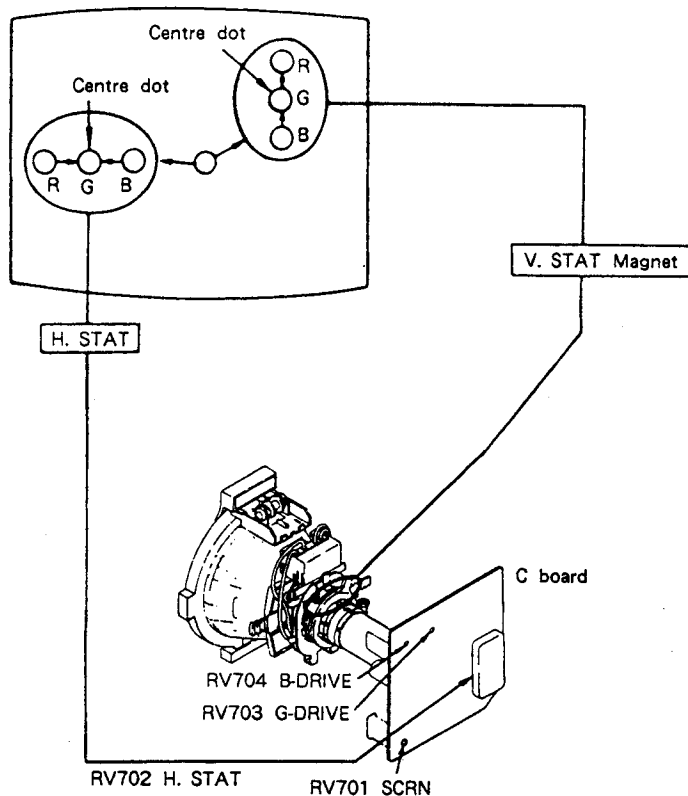
Fig. 3-4

3-2. CONVERGENCE

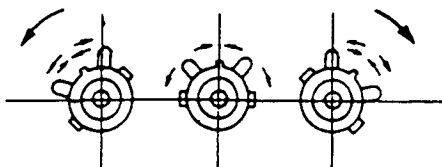
Preparation :

- Before starting, perform FOCUS, H. SIZE and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.

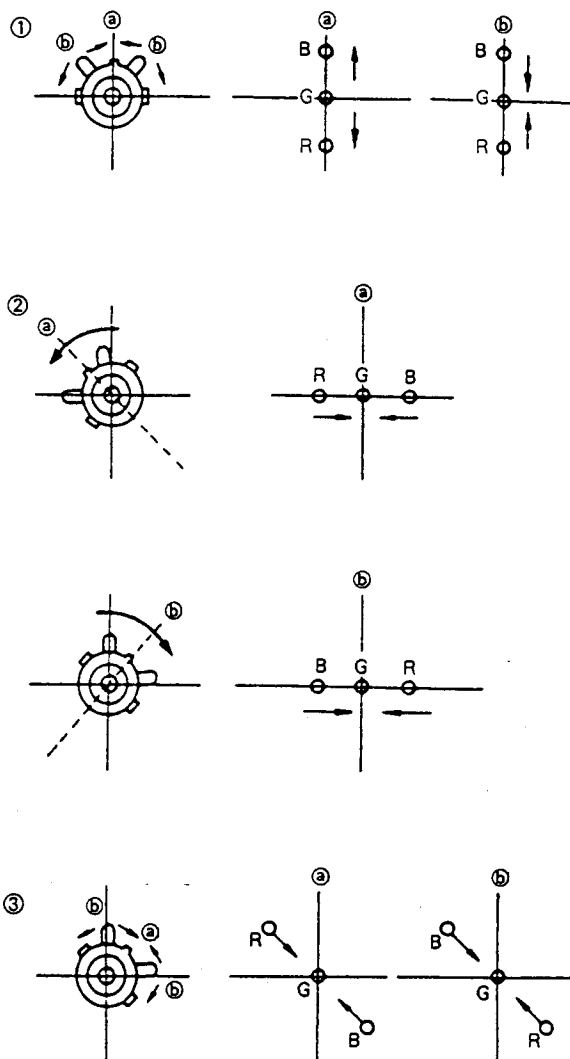
(1) Horizontal and Vertical Static Convergence



1. Adjust H. STAT VR to coincide red, green and blue dots on the centre of screen.(Horizontal movement)
 2. Adjust V. STAT magnet to coincide red, green and blue dots on the center of screen.(Vertical movement)
 3. If the red, green and blue dots do not coincide on the center of screen with H. STAT VR, perform horizontal convergence adjustment using H. STAT VR and V. STAT magnet as shown below. (In this case, H. STAT VR and V. STAT magnet effect each other.)
- Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



4. When the V. STAT magnet is moved in the direction of arrow (a) and (b), red, green and blue dots move as shown below.

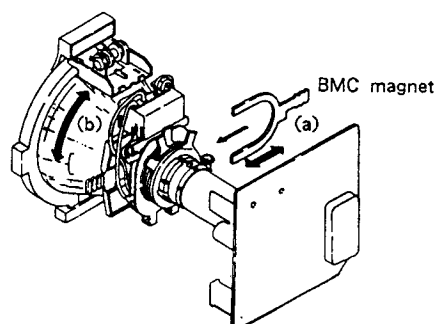


If the red and blue dots do not coincide with green dot, perform following steps.

Move BMC magnet (a) to correct insufficient H. static convergence.

Rotate BMC magnet (b) to correct insufficient V. static convergence.

In either case, repeat Beam Landing Adjustment.



5

6

7

8

9

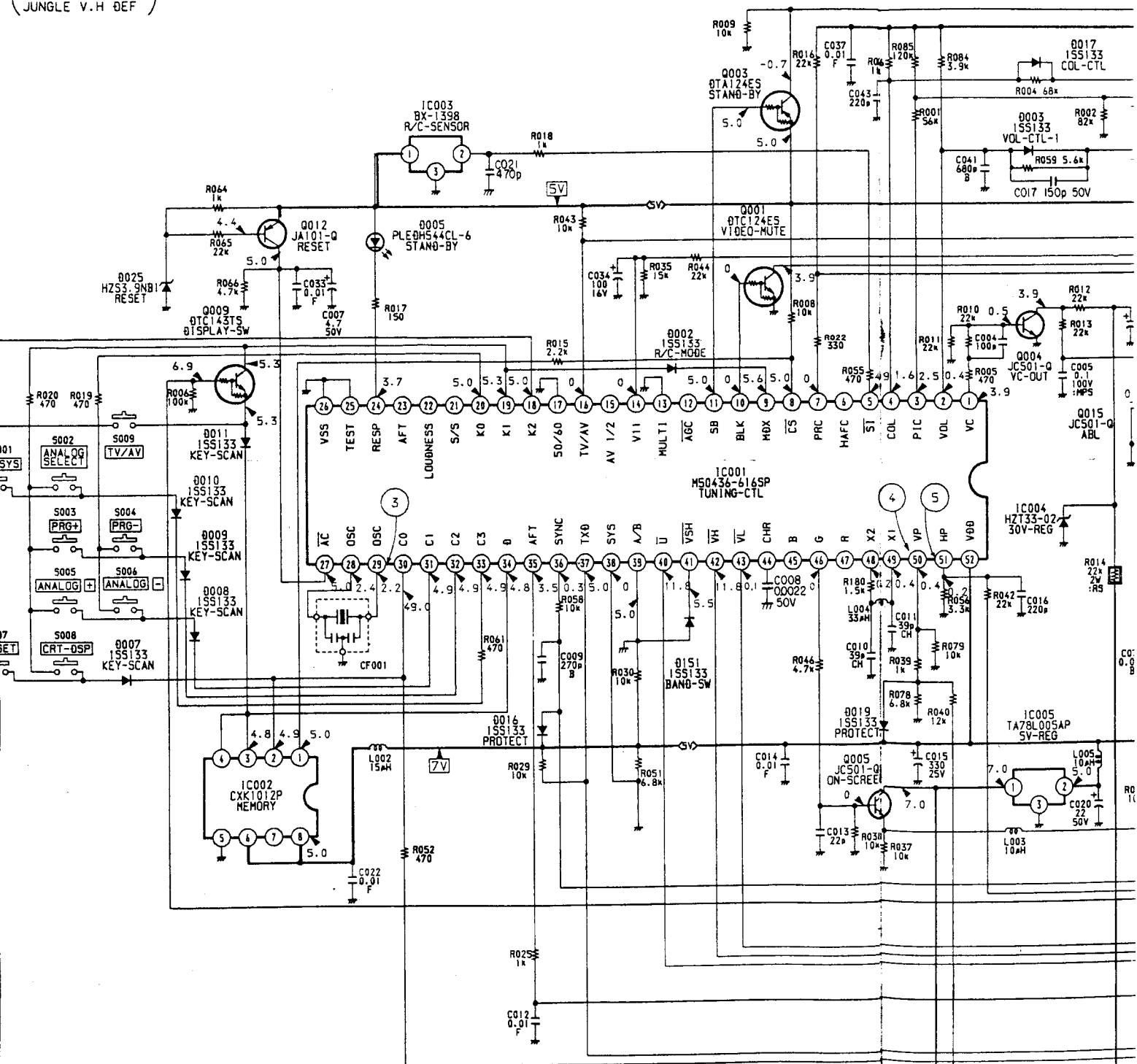
10

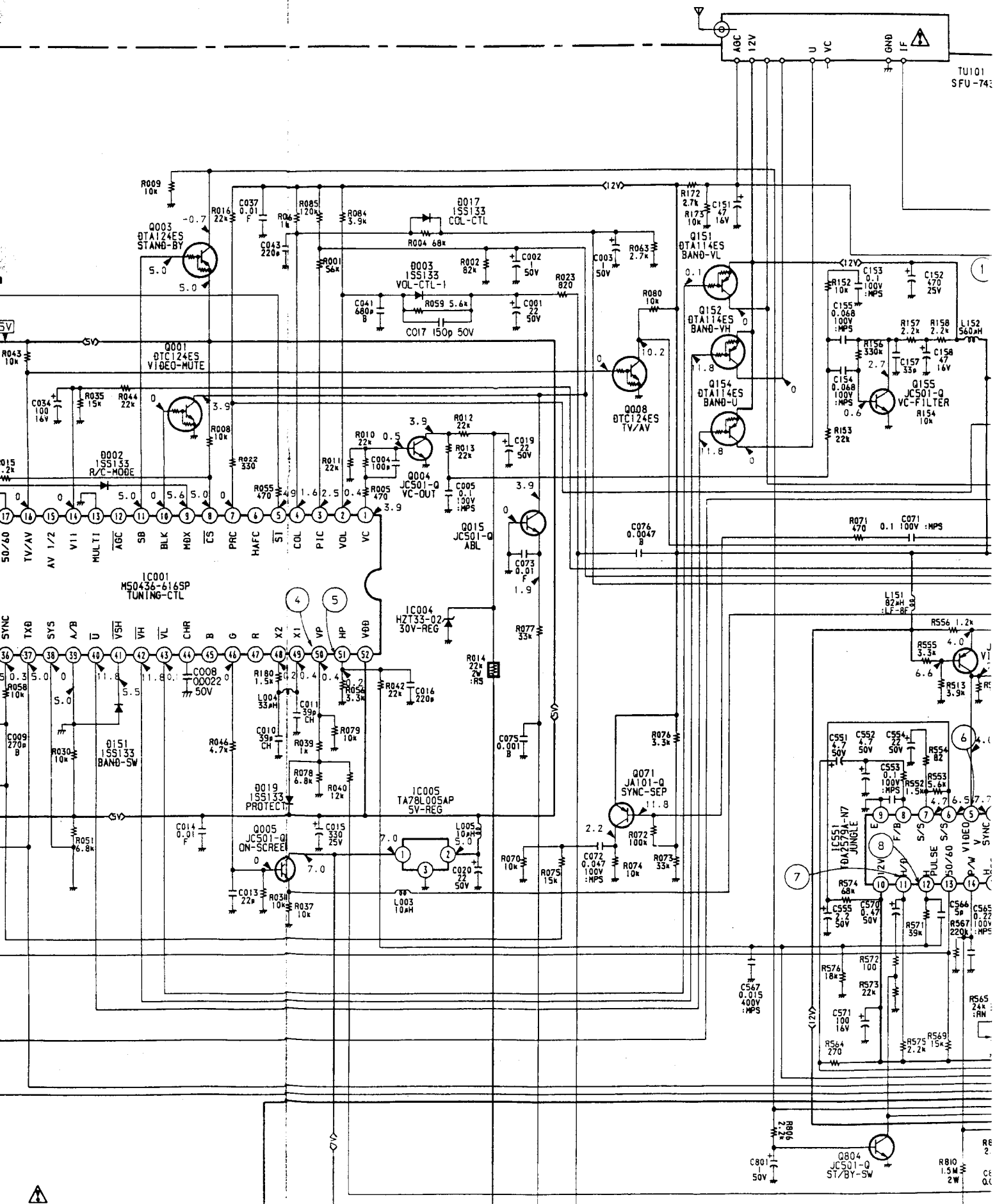
11

12

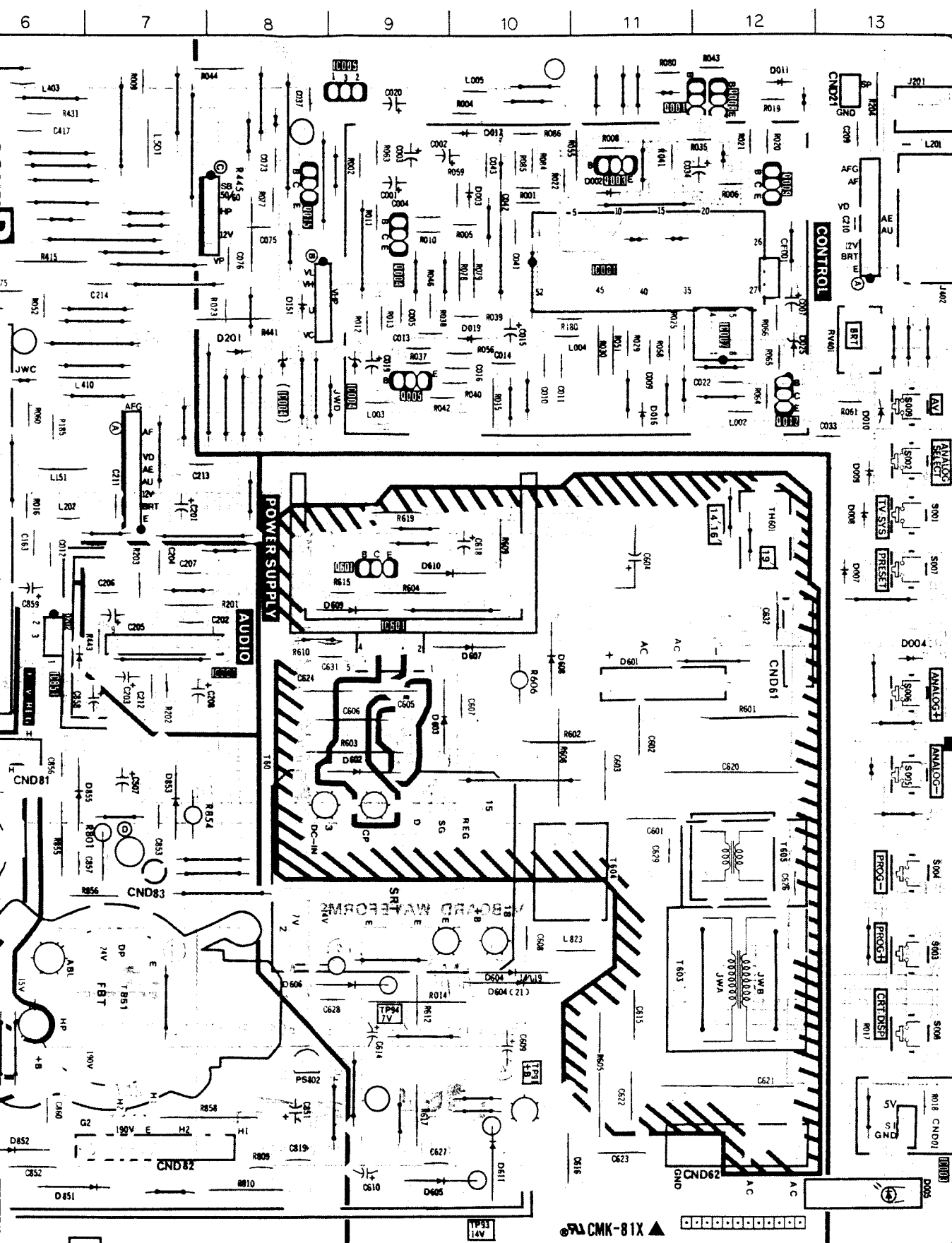
Y-CHROMA

(JUNGLE V.H DEF)



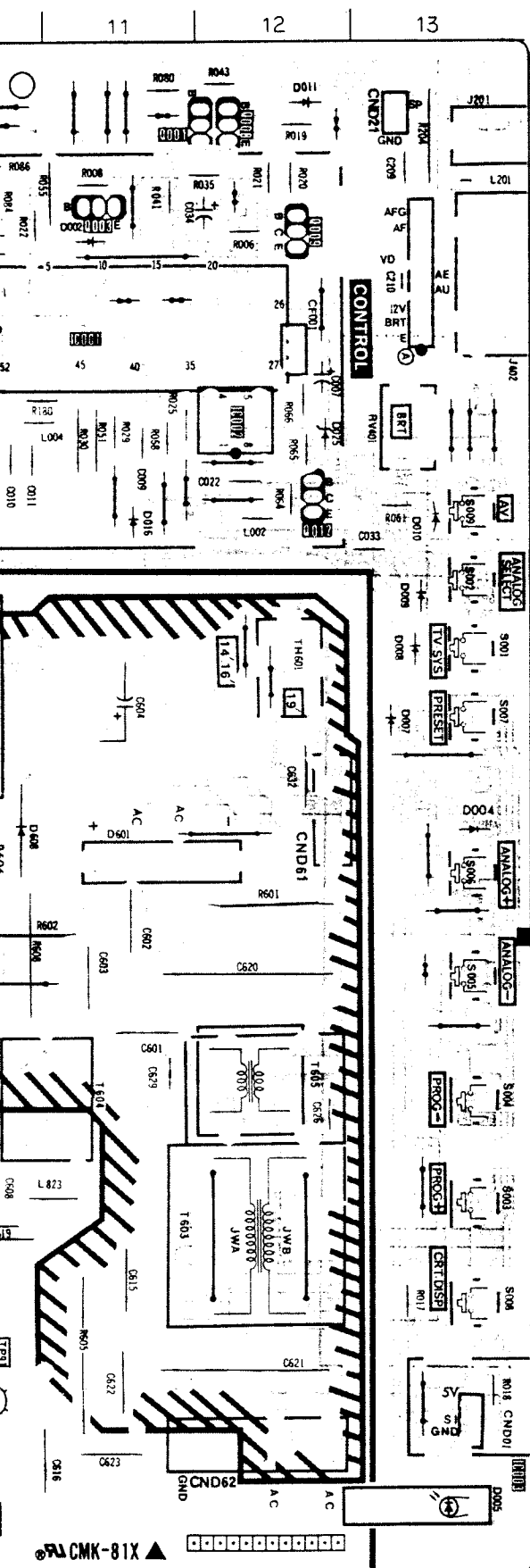


D Y-CHROMA
JUNGLE, V.H DEF



IC	
IC001	B
IC002	C
IC003	I
IC004	C
IC005	A
IC201	E
IC401	C
IC402	B
IC406	B
IC501	G
IC551	I
IC601	E
IC801	G
IC851	F
TRANSISTOR	
Q001	A
Q003	B
Q004	B
Q005	C
Q008	A
Q009	B
Q012	C
Q071	C
Q151	E
Q152	E
Q154	E
Q155	E
Q158	E
Q402	B
Q403	C
Q404	C
Q405	E
Q406	B
Q501	H
Q551	A
Q601	E
Q801	J
Q802	J
Q803	H
Q804	I
DIODE	
D002	B
D003	B
D004	F
D005	J
D007	E
D008	D
D009	D
D010	D
D011	A
D016	D





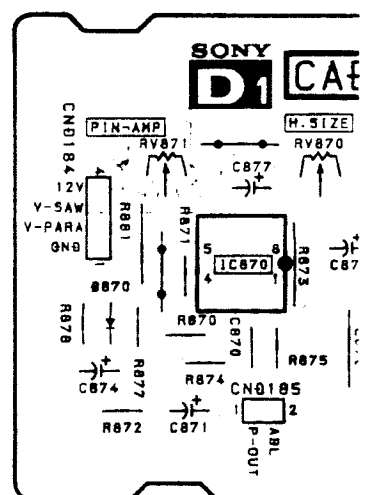
IC			
IC001	B-11	D017	A-10
IC002	C-12	D019	C-10
IC003	I-13	D025	C-12
IC004	C-9	D151	C-8
IC005	A-9	D156	E-3
		D201	C-8
IC201	E-7	D402	D-1
IC401	C-2	D403	D-1
IC402	B-2	D405	C-3
IC406	B-5	D406	D-2
IC501	G-1	D407	D-2
IC551	I-1	D408	D-2
IC601	E-9	D410	B-2
IC801	G-2	D412	C-2
IC851	F-6	D413	B-1
TRANSISTOR		D414	C-4
Q001	A-11	D415	C-3
Q003	B-11	D416	A-3
Q004	B-9	D420	C-4
Q005	C-9	D421	A-4
Q008	A-12	D501	G-1
Q009	B-12	D551	I-2
Q012	C-12	D602	F-9
Q071	C-5	D603	F-9
Q151	E-2	D604	H-10
Q152	E-2	D605	J-10
Q154	E-3	D606	H-9
Q155	E-5	D607	E-10
Q158	E-5	D608	F-10
Q402	B-3	D609	E-9
Q403	C-3	D610	E-9
Q404	C-3	D611	I-10
Q405	E-2	D801	I-5
Q406	B-3	D802	I-4
Q501	H-2	D851	J-7
Q551	A-2	D852	J-6
Q601	E-9	D853	G-7
Q801	J-3	D855	G-6
Q802	J-5	D857	F-6
Q803	H-3	D858	G-6
Q804	I-3	VARIABLE RESISTOR	
DIODE		RV401	C-13
D002	B-11	RV501	G-2
D003	B-10	RV552	H-1
D004	F-13	RV553	J-2
D005	J-13	RV562	I-1
D007	E-13	RV801	G-5
D008	D-13		
D009	D-13		
D010	D-13		
D011	A-12		
D016	D-11		



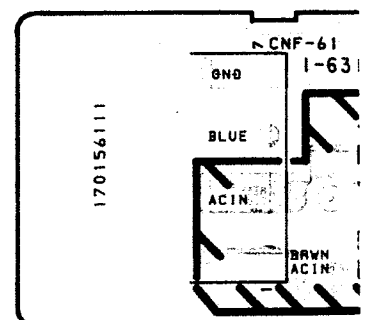
NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

- D1 Board -

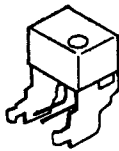


- F Board -

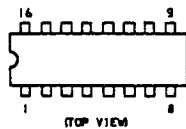


5-4. SEMICONDUCTORS

BX-1398



MC14053BCP
TC4053BP
TDA4510-V6



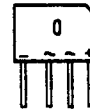
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BF871
JA101-Q
JC501-Q
2SA1091
2SC2060



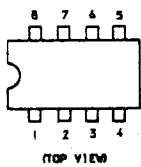
2S02096



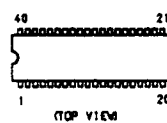
KBU4J



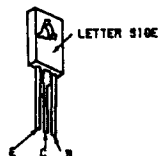
CXK1012P
TEA2014A
μPC4558C



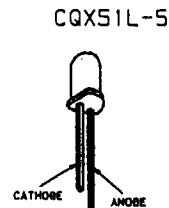
SAA5243E



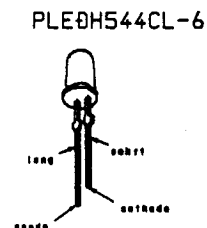
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2SC2611
2SC2688



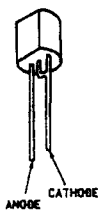
BY033G
BYT510
BYT52G
ERA81-004
ES1F
GP080
RGP01-17
RGP10G
RGP15J



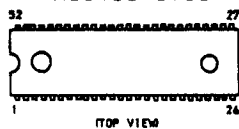
CQX51L-5



HZT33-02
μPC574J



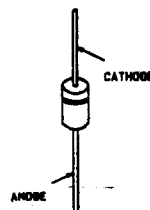
M50436-616SP



BU5060F
2S01761-F



ERC06-15S
R2M



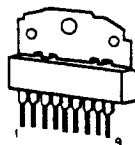
L78M05CX
L78M12CV
TA78L005P



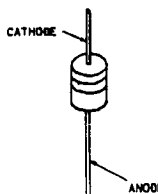
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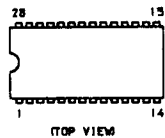
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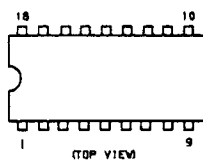
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0TA124ES
0TC114ES
0TC124ES
0TC143TS



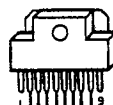
MAB8461P-W136
SAA5231-V6
TDA3505-V9
μPD4364CX-15L



TDA2579-N7



μPC1488H



SECTION 6

EXPLODED VIEWS

NOTE:

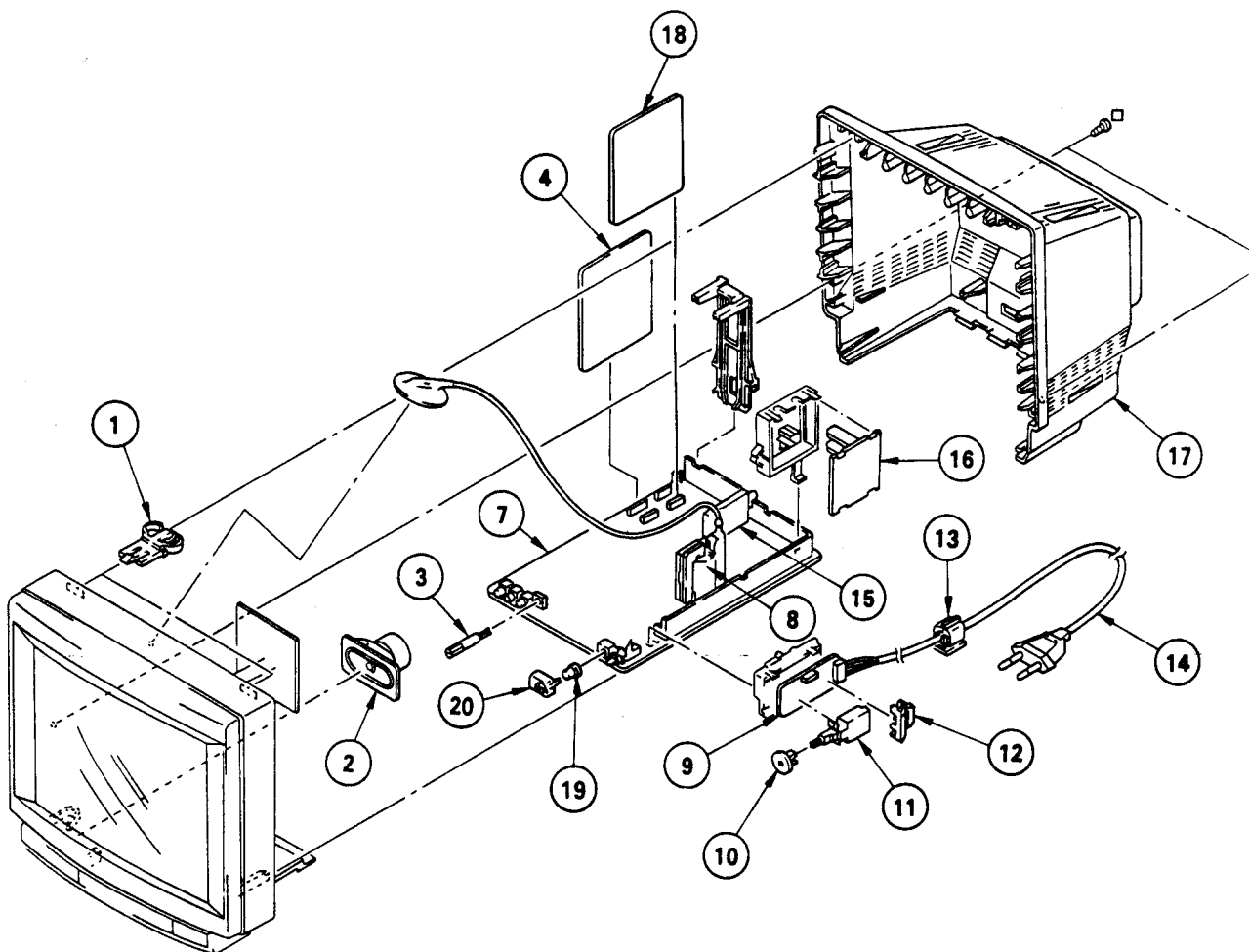
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

6-1. REAR COVER

□: BVTP4 x 16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	4-387-960-01	HOLDER, REAR COVER		12	*4-386-620-02	COVER, POWER	
2	1-503-258-21	SPEAKER		13 Δ	4-389-202-02	HOLDER, AC CORD	
3	4-389-302-01	KNOB, VOLUME		14 Δ	1-559-347-11	CORD, POWER (WITH CONNECTOR)	
4	*A-1135-612-A	B BOARD, COMPLETE		15 Δ	1-465-035-11	TUNER, ET (SUF-743)	
7	*A-1345-889-A	D BOARD, COMPLETE (KV-M2121U ONLY)		16	*1-631-127-11	D1 BOARD	
	*A-1345-890-A	D BOARD, COMPLETE (KV-M2120U ONLY)		17	4-391-472-01	COVER, REAR (BLACK)	
8 Δ	1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)			4-391-472-11	COVER, REAR (WHITE)	
9	*1-631-128-11	F BOARD		18	*A-1347-031-A	V BOARD, COMPLETE (KV-M2121U ONLY)	
10	4-386-611-01	COVER, SWITCH		19	*4-374-987-01	GUIDE LIGHT	
11 Δ	1-571-433-11	SWITCH, PUSH (AC POWER)		20	*4-388-955-01	BRACKET (B) LIGHT GUIDE	

V

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<CAPACITOR>				<COIL>			
C02	1-124-120-11	ELECT 220MF	20% 16V	L01	1-408-411-00	INDUCTOR 15UH	
C03	1-124-119-00	ELECT 330MF	20% 16V	L04	1-408-407-00	INDUCTOR 6.8UH	
C05	1-126-101-11	ELECT 100MF	20% 16V	L05	1-408-407-00	INDUCTOR 6.8UH	
C06	1-124-120-11	ELECT 220MF	20% 16V	L06	1-408-407-00	INDUCTOR 6.8UH	
C07	1-124-499-11	ELECT 1MF	20% 50V				
C08	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	<IC LINK>			
C09	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	PS01 Δ	1-532-679-91	LINK, IC 0.6A	
C10	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	PS02 Δ	1-532-727-91	LINK, IC 0.25A	
C11	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V				
C12	1-163-127-00	CERAMIC CHIP 270PF	5% 50V	<TRANSISTOR>			
C13	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	Q3	8-729-900-53	TRANSISTOR DTC114EK	
C14	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	Q01	8-729-808-76	TRANSISTOR 2SD1913SA	
C15	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	Q02	8-729-807-50	TRANSISTOR 2SD1623-R	
C16	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	Q04	8-729-271-22	TRANSISTOR 2SC2712-G	
C17	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	Q05	8-729-807-50	TRANSISTOR 2SD1623-R	
C18	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	Q06	8-729-271-22	TRANSISTOR 2SC2712-G	
C19	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	Q07	8-729-900-98	TRANSISTOR DTC143TK	
C20	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	Q09	8-729-807-87	TRANSISTOR 2SB1295-UL6	
C21	1-163-833-00	CERAMIC CHIP 0.068MF	25V	Q10	8-729-807-87	TRANSISTOR 2SB1295-UL6	
C24	1-126-101-11	ELECT 100MF	20% 16V	Q11	8-729-807-87	TRANSISTOR 2SB1295-UL6	
C25	1-124-477-11	ELECT 47MF	20% 16V	<RESISTOR>			
C27	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	JW1	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C28	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	JW2	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C29	1-124-927-11	ELECT 4.7MF	20% 50V	JW3	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C51	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW4	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C52	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW5	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C53	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW6	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C54	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW7	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C55	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW8	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C56	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW9	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C57	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JW10	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C58	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JW11	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C59	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JW12	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<CONNECTOR>				JW13	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNV01	*1-565-393-11	CONNECTOR, BOARD TO BOARD		JW14	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNV02	*1-565-393-11	CONNECTOR, BOARD TO BOARD		JW15	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNV03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		JW16	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<TRIMMER>				JW17	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CT01	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)		JW18	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<DIODE>				JW19	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D01	8-719-105-91	DIODE RD5.6M-B2		JW20	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D02	8-719-106-79	DIODE RD13M-B1		JW21	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D03	8-719-400-18	DIODE MA152WK		JW22	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D04	8-719-105-52	DIODE RD3.6M-B2		JW23	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D07	8-719-106-17	DIODE RD6.8M-B2		JW24	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D08	8-719-106-17	DIODE RD6.8M-B2		JW25	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D09	8-719-400-18	DIODE MA152WK		R01	1-218-326-11	METAL GLAZE 470 5% 1/2W	
D10	8-719-400-18	DIODE MA152WK		R02	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
D11	8-719-914-44	DIODE DAP202K		R04	1-218-326-11	METAL GLAZE 470 5% 1/2W	
D12	8-719-914-44	DIODE DAP202K		R05	1-216-025-00	METAL GLAZE 100 5% 1/10W	
<IC>				R06	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
IC1	8-759-986-92	IC SMAB8461P-W177		R07	1-216-025-00	METAL GLAZE 100 5% 1/10W	
IC2	8-759-972-96	IC SAA5231-V6		R08	1-216-037-00	METAL GLAZE 330 5% 1/10W	
IC3	8-759-032-98	IC SDA5243		R09	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
IC4	8-759-230-68	IC TMM2063P-70		R13	1-216-025-00	METAL GLAZE 100 5% 1/10W	
				R14	1-216-025-00	METAL GLAZE 100 5% 1/10W	
				R15	1-216-121-00	METAL GLAZE 1M 5% 1/10W	

The components identified by shading and mark Δ are critical for safety.

Replace only with part number specified.

V

REF.NO.	PART NO.	DESCRIPTION	REMARK
R16	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R17	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R18	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R19	1-216-037-00	METAL GLAZE 330 5%	1/10W
R20	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R27	1-216-013-00	METAL GLAZE 33 5%	1/10W
R28	1-216-013-00	METAL GLAZE 33 5%	1/10W
R29	1-216-013-00	METAL GLAZE 33 5%	1/10W
R30	1-218-325-11	METAL GLAZE 120 5%	1/4W
R31	1-218-325-11	METAL GLAZE 120 5%	1/4W
R32	1-218-325-11	METAL GLAZE 120 5%	1/4W
R33	1-216-023-00	METAL GLAZE 82 5%	1/10W
R34	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R37	1-216-025-00	METAL GLAZE 100 5%	1/10W
R38	1-216-047-00	METAL GLAZE 820 5%	1/10W
R40	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R41	1-216-041-00	METAL GLAZE 470 5%	1/10W
R43	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R44	1-216-041-00	METAL GLAZE 470 5%	1/10W
R45	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R46	1-216-311-00	METAL GLAZE 6.8 5%	1/10W
R51	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R52	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R53	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R54	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R55	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R56	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R57	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R58	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R59	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R60	1-216-076-00	METAL GLAZE 13K 5%	1/10W
R61	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R62	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R63	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R64	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R65	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R66	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R67	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R68	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R69	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W

<VARIABLE RESISTOR>

RV01 1-238-012-11 RES. ADJ. CARBON 1K

<CRYSTAL>

X01 1-567-162-21 OSCILLATOR, CRYSTAL
X02 1-567-495-21 OSCILLATOR, CRYSTAL
X03 1-577-082-11 VIBRATOR, CERAMIC

MISCELLANEOUS

1-452-032-00 MAGNET, DISK; 10MM ϕ
1-452-094-00 MAGNET, ROTATABLE DISK; 15MM ϕ
1-452-277-00 MAGNET, BMC
1-503-258-21 SPEAKER
SP901 Δ 1-559-347-11 CORD, POWER (WITH CONNECTOR)
L901 Δ 1-426-383-11 COIL, DEMAGNETIZATION
L902 Δ 1-451-295-31 DEFLECTION YOKE (Y21PFA2)
V901 Δ 8-738-753-05 PICTURE TUBE (A51JXH60X)

ACCESSORIES AND PACKING MATERIALS

PART NO.	DESCRIPTION	REMARK
A-1470-886-A	COMMANDER ASSY (RM-670)	
3-750-486-11	MANUAL, INSTRUCTION	
*4-380-340-01	BAG, PROTECTION	
*4-385-902-01	INDIVIDUAL CARTON	
*4-387-961-01	CUSHION (UPPER) (ASSY)	
*4-387-962-01	CUSHION (LOWER) (ASSY)	

5

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7

8

9

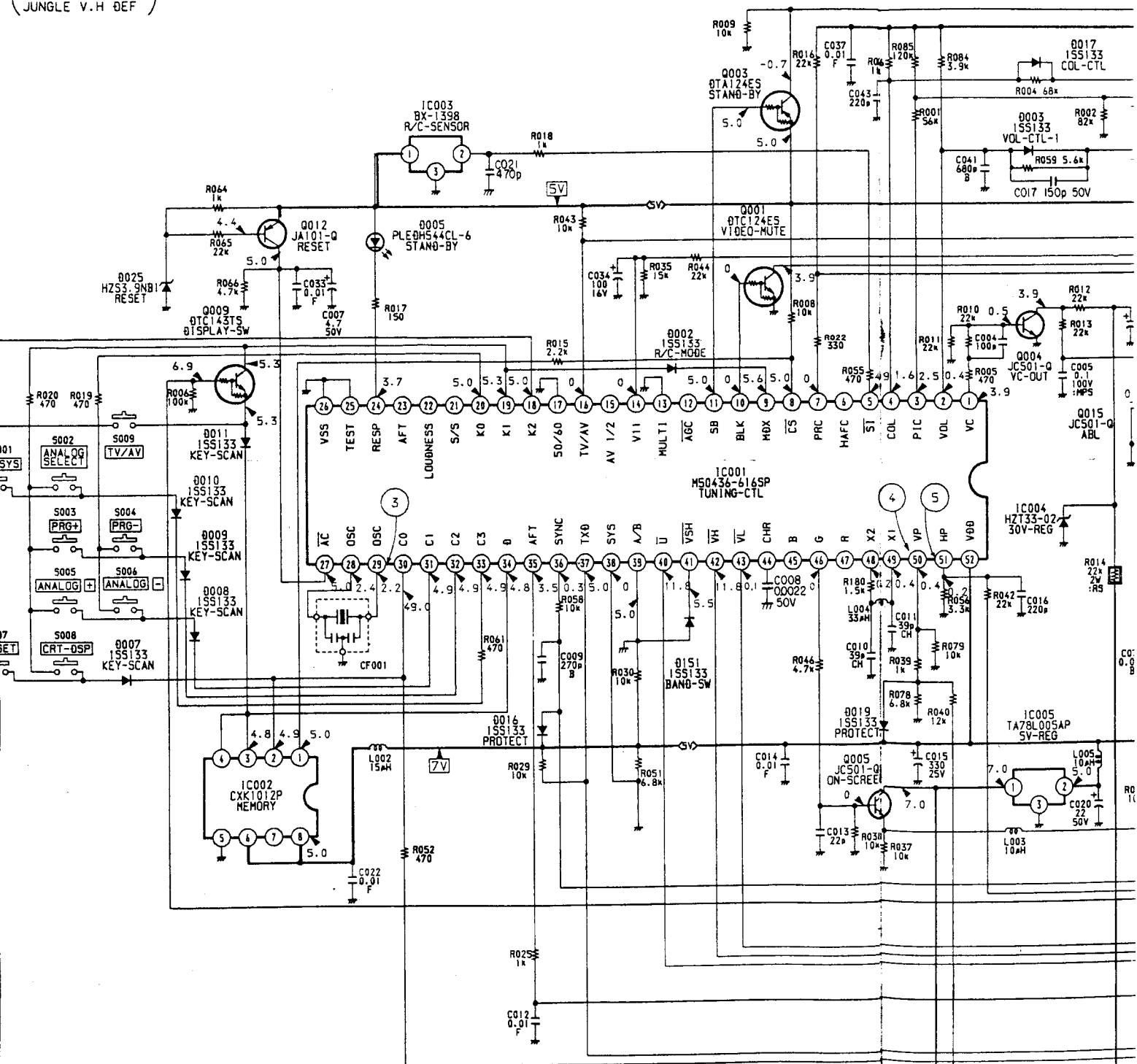
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11

12

Y-CHROMA

(JUNGLE V.H DEF)



9

10

11

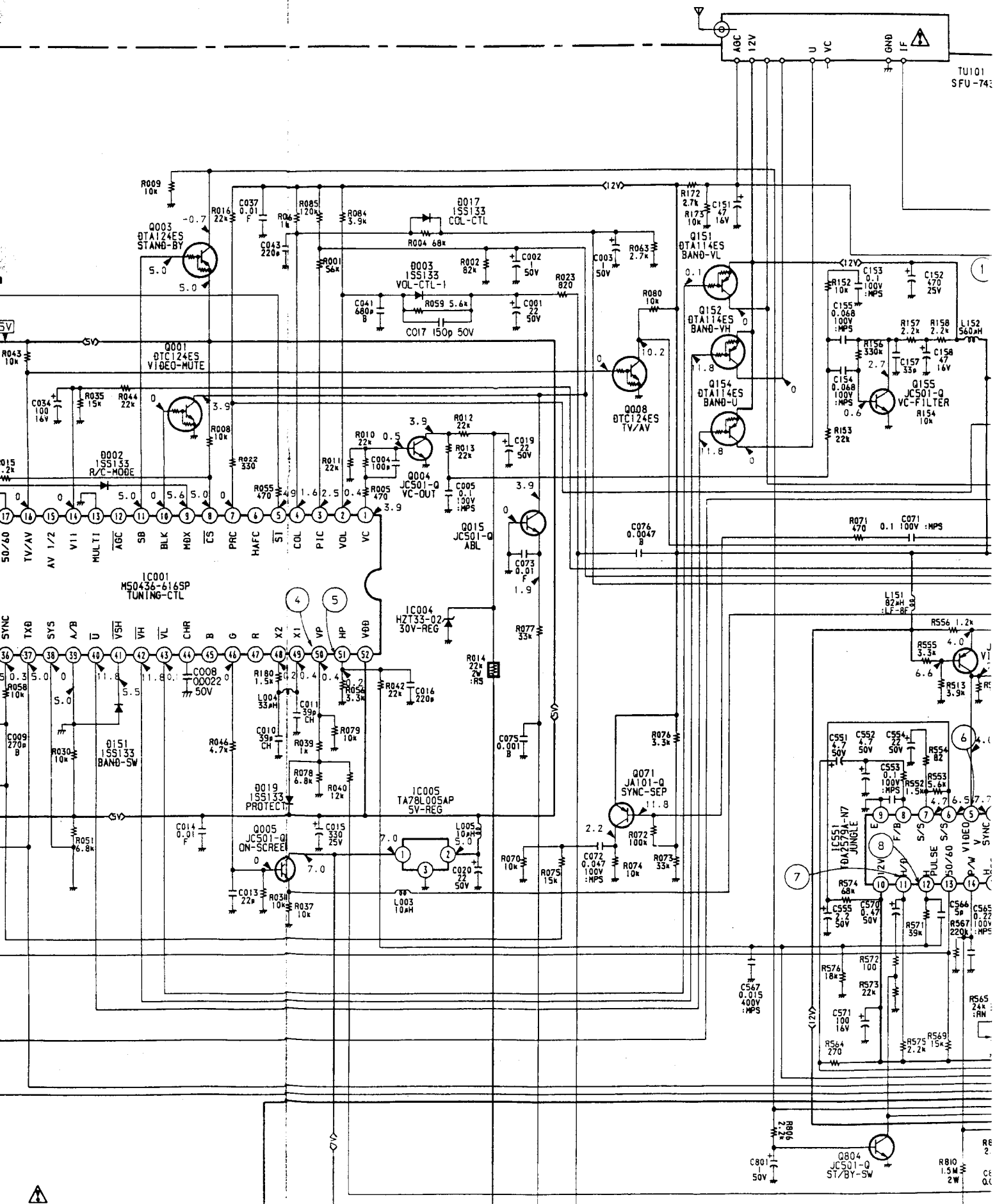
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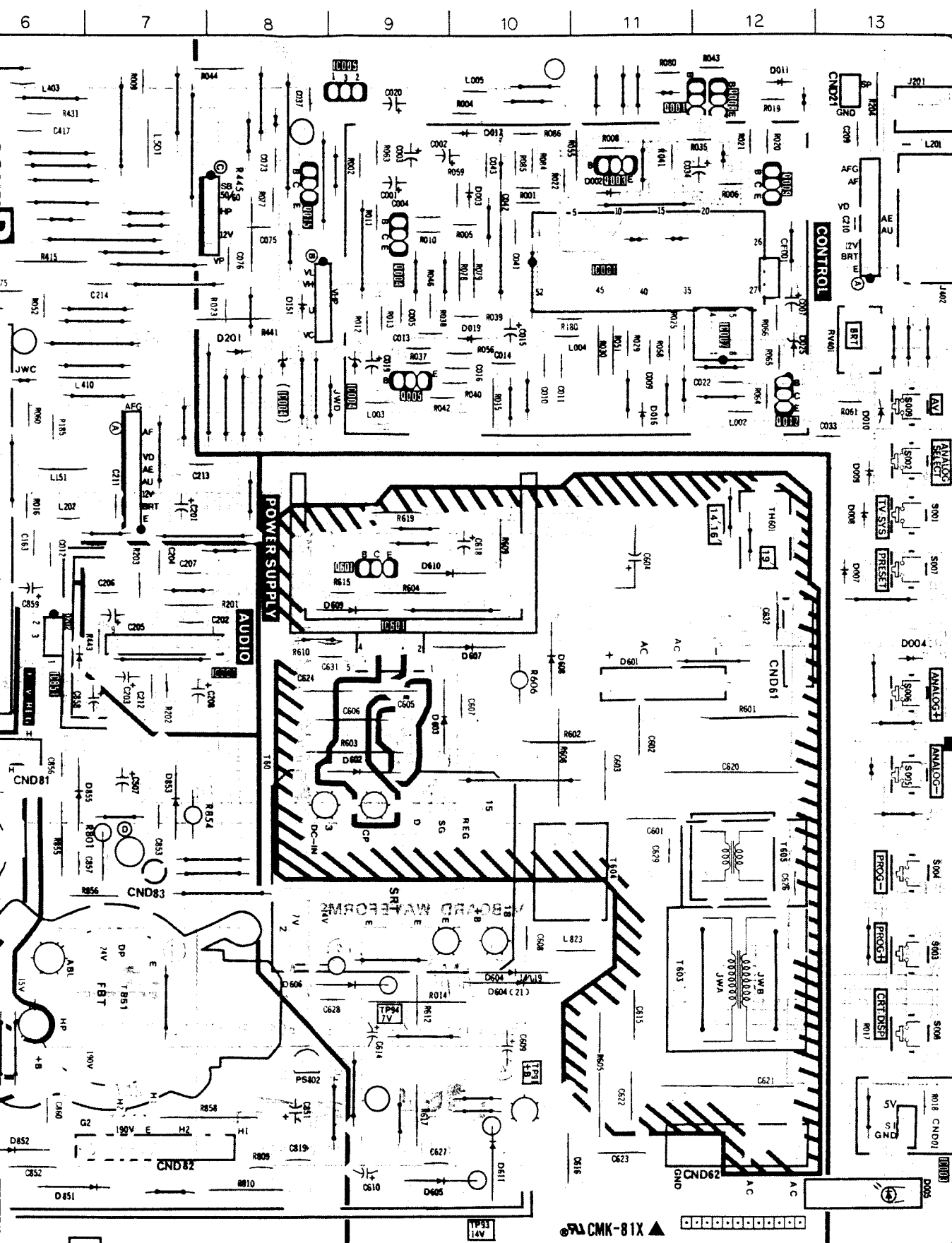
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15

16



D Y-CHROMA
JUNGLE, V.H DEF

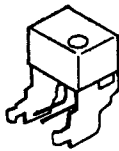


IC	
IC001	B
IC002	C
IC003	I
IC004	C
IC005	A
IC201	E
IC401	C
IC402	B
IC406	B
IC501	G
IC551	I
IC601	E
IC801	G
IC851	F
TRANSISTOR	
Q001	A
Q003	B
Q004	B
Q005	C
Q008	A
Q009	B
Q012	C
Q071	C
Q151	E
Q152	E
Q154	E
Q155	E
Q158	E
Q402	B
Q403	C
Q404	C
Q405	E
Q406	B
Q501	H
Q551	A
Q601	E
Q801	J
Q802	J
Q803	H
Q804	I
DIODE	
D002	B
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D004	F
D005	J
D007	E
D008	D
D009	D
D010	A
D011	A
D016	D

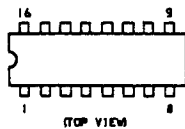


5-4. SEMICONDUCTORS

BX-1398



MC14053BCP
TC4053BP
TDA4510-V6



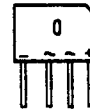
BF199
BF871
JA101-Q
JC501-Q
2SA1091
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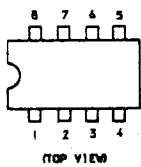
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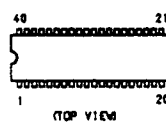
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TEA2014A
μPC4558C



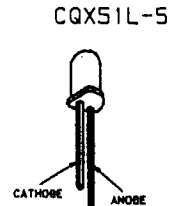
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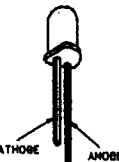
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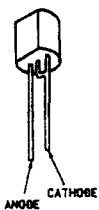
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BYT52G
ERA81-004
ES1F
GP080
RGP01-17
RGP10G
RGP15J



CQX51L-5



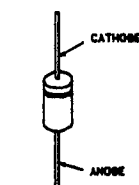
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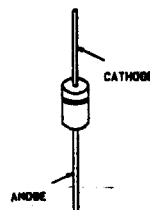
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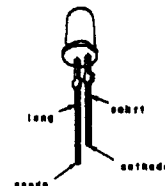
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ERC06-15S
R2M



PLE0H544CL-6



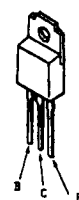
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L78M12CV
TA78L005P



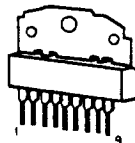
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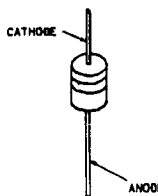
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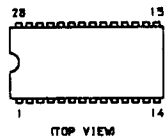
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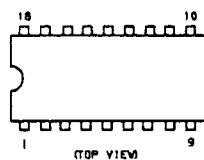
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HZS5.6NB1
HZS6.8NB1
HZS12NB1
HZS9.1NB1
R03.6ES-B2
R013ES-B2
1SS133
1SS148



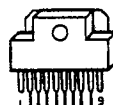
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SAA5231-V6
TDA3505-V9
μPD4364CX-15L



TDA2579-N7



μPC1488H



0TA114ES
0TA124ES
0TC114ES
0TC124ES
0TC143TS



SECTION 6

EXPLODED VIEWS

NOTE:

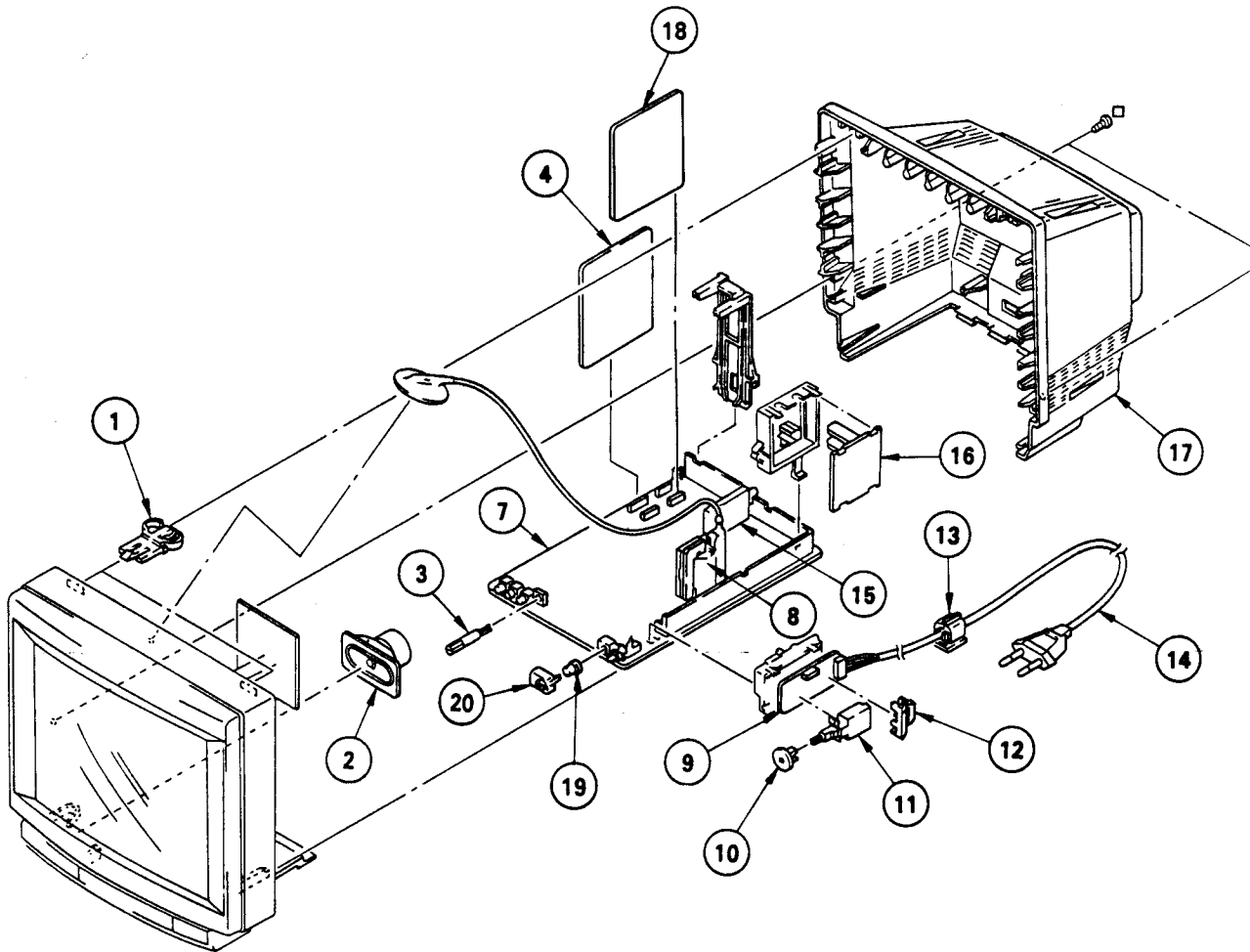
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

6-1. REAR COVER

□: BVTP4 x 16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	4-387-960-01	HOLDER, REAR COVER		12	*4-386-620-02	COVER, POWER	
2	1-503-258-21	SPEAKER		13 Δ	4-389-202-02	HOLDER, AC CORD	
3	4-389-302-01	KNOB, VOLUME		14 Δ	1-559-347-11	CORD, POWER (WITH CONNECTOR)	
4	*A-1135-612-A	B BOARD, COMPLETE		15 Δ	1-465-035-11	TUNER, ET (SUF-743)	
7	*A-1345-889-A	D BOARD, COMPLETE (KV-M2121U ONLY)		16	*1-631-127-11	D1 BOARD	
	*A-1345-890-A	D BOARD, COMPLETE (KV-M2120U ONLY)		17	4-391-472-01	COVER, REAR (BLACK)	
8 Δ	1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)			4-391-472-11	COVER, REAR (WHITE)	
9	*1-631-128-11	F BOARD		18	*A-1347-031-A	V BOARD, COMPLETE (KV-M2121U ONLY)	
10	4-386-611-01	COVER, SWITCH		19	*4-374-987-01	GUIDE LIGHT	
11 Δ	1-571-433-11	SWITCH, PUSH (AC POWER)		20	*4-388-955-01	BRACKET (B) LIGHT GUIDE	

V

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<CAPACITOR>				<COIL>			
C02	1-124-120-11	ELECT 220MF	20% 16V	L01	1-408-411-00	INDUCTOR 15UH	
C03	1-124-119-00	ELECT 330MF	20% 16V	L04	1-408-407-00	INDUCTOR 6.8UH	
C05	1-126-101-11	ELECT 100MF	20% 16V	L05	1-408-407-00	INDUCTOR 6.8UH	
C06	1-124-120-11	ELECT 220MF	20% 16V	L06	1-408-407-00	INDUCTOR 6.8UH	
C07	1-124-499-11	ELECT 1MF	20% 50V				
C08	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	<IC LINK>			
C09	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	PS01 Δ	1-532-679-91	LINK, IC 0.6A	
C10	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	PS02 Δ	1-532-727-91	LINK, IC 0.25A	
C11	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V				
C12	1-163-127-00	CERAMIC CHIP 270PF	5% 50V	<TRANSISTOR>			
C13	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	Q3	8-729-900-53	TRANSISTOR DTC114EK	
C14	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	Q01	8-729-808-76	TRANSISTOR 2SD1913SA	
C15	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	Q02	8-729-807-50	TRANSISTOR 2SD1623-R	
C16	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	Q04	8-729-271-22	TRANSISTOR 2SC2712-G	
C17	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	Q05	8-729-807-50	TRANSISTOR 2SD1623-R	
C18	1-163-099-00	CERAMIC CHIP 18PF	5% 50V	Q06	8-729-271-22	TRANSISTOR 2SC2712-G	
C19	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	Q07	8-729-900-98	TRANSISTOR DTC143TK	
C20	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	Q09	8-729-807-87	TRANSISTOR 2SB1295-UL6	
C21	1-163-833-00	CERAMIC CHIP 0.068MF	25V	Q10	8-729-807-87	TRANSISTOR 2SB1295-UL6	
C24	1-126-101-11	ELECT 100MF	20% 16V	Q11	8-729-807-87	TRANSISTOR 2SB1295-UL6	
C25	1-124-477-11	ELECT 47MF	20% 16V	<RESISTOR>			
C27	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	JW1	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C28	1-163-137-00	CERAMIC CHIP 680PF	5% 50V	JW2	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C29	1-124-927-11	ELECT 4.7MF	20% 50V	JW3	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C51	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW4	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C52	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW5	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C53	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW6	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C54	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW7	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C55	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW8	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C56	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JW9	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C57	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JW10	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C58	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JW11	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C59	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JW12	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<CONNECTOR>				JW13	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNV01	*1-565-393-11	CONNECTOR, BOARD TO BOARD		JW14	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNV02	*1-565-393-11	CONNECTOR, BOARD TO BOARD		JW15	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CNV03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		JW16	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<TRIMMER>				JW17	1-216-295-00	METAL GLAZE 0 5% 1/10W	
CT01	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)		JW18	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<DIODE>				JW19	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D01	8-719-105-91	DIODE RD5.6M-B2		JW20	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D02	8-719-106-79	DIODE RD13M-B1		JW21	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D03	8-719-400-18	DIODE MA152WK		JW22	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D04	8-719-105-52	DIODE RD3.6M-B2		JW23	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D07	8-719-106-17	DIODE RD6.8M-B2		JW24	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D08	8-719-106-17	DIODE RD6.8M-B2		JW25	1-216-295-00	METAL GLAZE 0 5% 1/10W	
D09	8-719-400-18	DIODE MA152WK		R01	1-218-326-11	METAL GLAZE 470 5% 1/2W	
D10	8-719-400-18	DIODE MA152WK		R02	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
D11	8-719-914-44	DIODE DAP202K		R04	1-218-326-11	METAL GLAZE 470 5% 1/2W	
D12	8-719-914-44	DIODE DAP202K		R05	1-216-025-00	METAL GLAZE 100 5% 1/10W	
<IC>				R06	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
IC1	8-759-986-92	IC SMAB8461P-W177		R07	1-216-025-00	METAL GLAZE 100 5% 1/10W	
IC2	8-759-972-96	IC SAA5231-V6		R08	1-216-037-00	METAL GLAZE 330 5% 1/10W	
IC3	8-759-032-98	IC SDA5243		R09	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
IC4	8-759-230-68	IC TMM2063P-70		R13	1-216-025-00	METAL GLAZE 100 5% 1/10W	
				R14	1-216-025-00	METAL GLAZE 100 5% 1/10W	
				R15	1-216-121-00	METAL GLAZE 1M 5% 1/10W	

The components identified by shading and mark Δ are critical for safety.

Replace only with part number specified.

V

REF.NO.	PART NO.	DESCRIPTION	REMARK
R16	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R17	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R18	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R19	1-216-037-00	METAL GLAZE 330 5%	1/10W
R20	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R27	1-216-013-00	METAL GLAZE 33 5%	1/10W
R28	1-216-013-00	METAL GLAZE 33 5%	1/10W
R29	1-216-013-00	METAL GLAZE 33 5%	1/10W
R30	1-218-325-11	METAL GLAZE 120 5%	1/4W
R31	1-218-325-11	METAL GLAZE 120 5%	1/4W
R32	1-218-325-11	METAL GLAZE 120 5%	1/4W
R33	1-216-023-00	METAL GLAZE 82 5%	1/10W
R34	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R37	1-216-025-00	METAL GLAZE 100 5%	1/10W
R38	1-216-047-00	METAL GLAZE 820 5%	1/10W
R40	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R41	1-216-041-00	METAL GLAZE 470 5%	1/10W
R43	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R44	1-216-041-00	METAL GLAZE 470 5%	1/10W
R45	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R46	1-216-311-00	METAL GLAZE 6.8 5%	1/10W
R51	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R52	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R53	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R54	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R55	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R56	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R57	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R58	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R59	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R60	1-216-076-00	METAL GLAZE 13K 5%	1/10W
R61	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R62	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R63	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R64	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R65	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R66	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R67	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R68	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R69	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W

<VARIABLE RESISTOR>

RV01 1-238-012-11 RES. ADJ. CARBON 1K

<CRYSTAL>

X01 1-567-162-21 OSCILLATOR, CRYSTAL
X02 1-567-495-21 OSCILLATOR, CRYSTAL
X03 1-577-082-11 VIBRATOR, CERAMIC

MISCELLANEOUS

1-452-032-00 MAGNET, DISK; 10MM ϕ
1-452-094-00 MAGNET, ROTATABLE DISK; 15MM ϕ
1-452-277-00 MAGNET, BMC
1-503-258-21 SPEAKER
SP901 Δ 1-559-347-11 CORD, POWER (WITH CONNECTOR)
L901 Δ 1-426-383-11 COIL, DEMAGNETIZATION
L902 Δ 1-451-295-31 DEFLECTION YOKE (Y21PFA2)
V901 Δ 8-738-753-05 PICTURE TUBE (A51JXH60X)

REF.NO.	PART NO.	DESCRIPTION	REMARK
ACCESSORIES AND PACKING MATERIALS *****			
PART NO.	DESCRIPTION	REMARK	
A-1470-886-A	COMMANDER ASSY (RM-670)		
3-750-486-11	MANUAL, INSTRUCTION		
*4-380-340-01	BAG, PROTECTION		
*4-385-902-01	INDIVIDUAL CARTON		
*4-387-961-01	CUSHION (UPPER) (ASSY)		
*4-387-962-01	CUSHION (LOWER) (ASSY)		